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CATALOGUE

OF THE

PHÆNOGAMOUS AND VASCULAR CRYPTOGAMOUS

PLANTS OF MICHIGAN,

INDIGENOUS, NATURALIZED, AND ADVENTIVE.

BY

CHAS. F. WHEELER AND ERWIN F. SMITH.

Hubbardston, Mich.

Hæc scire juvat.



LANSING:

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MICHIGAN FLORA.

PREPARED FOR THE MICHIGAN HORTICULTURAL SOCIETY BY CHARLES F. WHEELER AND ERWIN F. SMITH, HUBBARDSTON, MICHIGAN.

PREFACE.

This list of Michigan plants was made at the suggestion of the State Horticultural Society for publication in their tenth annual report. As a foundation, the authors have collected over 1,100 species of flowering plants and ferns in various parts of the State during the past fourteen years.

They have also made use of the following earlier catalogues of Michigan plants, and tender their acknowledgments accordingly: To the First (?) Catalogue of Michigan Plants, by Dr. Jno. Wright, embracing 850 species, which appeared in Dr. D. Houghton's Second Annual Report in the year 1839, published in "Senate Documents." This was a simple list of the plants collected during one season between Detroit river and Lake Michigan, in the first and second tiers of counties, alphabetically arranged and without notes. To W. A. Burt's Manuscript List of 185 species, from the central part of the Upper Peninsula, collected while running township lines in 1844, and identified by Dr. D. Cooley. To W. D. Whitney's "List of Plants of the Upper Peninsula," with notes, published in the second volume of Foster & Whitney's Report, in the year 1851, and comprising 417 species of plants, collected chiefly along the shore of the Great Lakes. To a "Manuscript List of the Plants Growing Spontaneously within Ten Miles of Cooley's Corners, Washington, Macomb County," which embraces 900 species of flowering plants and ferns, and was prepared for the Smithsonian Institute by Dr. D. Cooley in 1853. To N. H. Winchell's "Catalogue of Phænogamous and Acrogenous Plants found Growing Wild in the Lower Peninsula of Michigan and the Islands at the Head of Lake Huron," published in Prof. A. Winchell's "Geological Report" for 1860, and containing notes on distribution, frequency, etc. Cooley's plants form part of the Herbarium of the State Agricultural College. Wright's and Winchell's plants are in the State University Herbarium.

We also owe acknowledgments to the compilers of the following more recent Catalogues of Michigan Plants: To N. Coleman's List, published in 1874, by the Kent Scientific Institute, at Grand Rapids. To Miss E. C. Allmendinger's List of Ann Arbor Plants, which appeared in 1876. To Dr. A. B. Lyons' "Medicinal Plants Indigenous in Michigan,"—a paper read before the Detroit Academy of Medicine, Nov. 27, 1877. To a "List of Native Medicinal Plants of Michigan," prepared by Prof. Volney M. Spalding, of the University of

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Michigan, and published in the Proceedings of the Michigan Pharmaceutical Association in 1877. To a List of Michigan Plants, compiled by Dr. Elmore Palmer, in 1877.

Our acknowledgments are due to Prof. W. J. Beal, of the Michigan Agricultural College, for valuable assistance rendered. To Dr. D. Clark, of Flint, for specimens, and for a list of the plants of his vicinity. To Henry Gillman, Esq., of Detroit, for a list of Lake Superior plants collected by him. To Rev. E. J. Hill, of Engelwood, Ill., for lists and specimens from various localities along the east shore of Lake Michigan. To L. H. Bailey, Jr., of South Haven, for lists and specimens of plants growing in the vicinity of Lansing and South Haven.

More than a passing tribute is due to the little band of indefatigable naturalists of the past generation, who did so much pioneer work in developing all the resources of our fair State. First among them stands Dr. Douglass Houghton, while around him, among others, may be grouped the botanists, Dr. Zina Pitcher, Dr. Abram Sager, Dr. Dennis Cooley, and Dr. Daniel Clark, of whom alone Dr. Clark remains, full of years and still active in the pursuit of his favorite science. Miss Mary H. Clark, of Ann Arbor, was also well known, especially to the younger botanists of the State, as a life-long worker in this department of natural history, and one whose zeal and enthusiasm burned steadily through advancing years and only went out with her life.

Others have been connected, more or less, with the botanical interests of the State, either as teachers or collectors, among whom may be mentioned Prof. Geo. Thurber, Prof. A. N. Prentiss, and Prof. J. C. Holmes, of Detroit, all formerly connected with the State Agricultural College; Prof. M. W. Harrington, of the State University; O. B. Wheeler, Esq., of Detroit; Frank H. Tuthill, of Kalamazoo; and Rev. J. Shaup, of Hastings, Barry county.

In connection with the catalogue proper, the following hasty sketch of the main features of our flora may be of some interest. It is offered, however, *only as a sketch*, and is drawn chiefly from our own field-notes, jotted down during many a delightful ramble. The best part of botany, after all, is not in the books, and to any who find the following pages dry, we commend nature herself—that boundless, outdoor life, whose interest, beauty, and mystery is with us from the cradle to the grave, forever stimulating inquiry, and ever richly rewarding patient and loving toil.

The climate of the Upper Peninsula of Michigan is colder than that of the Lower Peninsula, the surface is considerably broken, especially in the western part, and the flora is in many respects decidedly northern, resembling in part that of British America, and in other respects like that of N. New England and Canada. Pines, firs, cedar, larch, junipers, elms, poplars, black ash, basswood, maples, and birches, are the principal trees. *Pinus strobus*, the prevailing species southward, is here largely supplanted by its more northern and less valuable congener, *P. resinosa*, whose tall, slim trunks are, however, in good demand for driving piles. Under-shrubs, like *Rubus Nutkanus* and *Toxus baccata*, var. *Canadensis*, are common, and indicate a tendency toward northern types that we find more strongly developed in the herbaceous plants. Among the latter we note as found rarely, or not at all, in the Lower Peninsula, but frequently northward, and often having a high northern range, such plants as *Anemone parviflora*, *Viola Selkirkii*, *Potentilla frigida*, *Stellaria borealis*, *Saxifraga aizoon*, *S. tricuspidata*, *Pinguicula vulgaris*, *Castilleja pallida*, *Halenia deflexa*, *Physalis grandiflora*, *Tofieldia palustris*, *Salix adenophylla*, *Eriophorum alpinum*, *Aspidium fragrans*, etc., etc.

The influence of climate on vegetation may be summed up in a few words. The climate of the Lower Peninsula is not as severe as that of the Upper, nor so even, but is subject to frequent, sudden, and extreme changes of temperature—as great a variation during the winter season as 53° Fahr. in less than 24 hours having been recorded. Such rapid changes more or less affect vegetation, especially the tender branches of cultivated trees, which are sometimes seriously injured. In one or two instances a like effect on our forest trees has been noticed. The annual range of temperature is about 116°, and the annual mean 46°. Of rain-fall, including what falls in form of snow, we have, yearly, about thirty inches. Our snow-fall is much less, for the same latitude, than that of New York and New England. In the center of the peninsula, we seldom have more than a few inches at a time.

The proximity of the Great Lakes exerts a marked influence in equalizing the temperature and the effects are marked upon our flora.

Trees like *Liriodendron Tulipifera*, *Asimina triloba*, *Cercis Canadensis*, *Gleditschia triacanthos*, *Cornus florida*, *Nyssa multiflora*, and *Morus rubra*, which belong to Ohio and Central Illinois, have crept northward, favored by the mild influence of the lake winds, through the central and western part of the Lower Peninsula, often beyond the middle, and the same is true of smaller and less noticeable plants.

As might be expected from the uniform surface of the peninsula, the flora is much alike throughout. Probably three-fourths of our species are common to all sections, though by no means equally distributed; some being very abundant in one district and rare in another at no great distance. In most cases such change is due to soil rather than to difference in elevation, temperature, or atmospheric moisture.

The Lower Peninsula is covered with a deep drift of alternating sands, clays, and gravels, and the flora of any section depends chiefly on which of these happens to lie uppermost. With reference to its flora, the Peninsula may be roughly divided into two great divisions—the hard-wood and the soft-wood lands; one representing the Appalachian flora, and the other, the Canadian.

The hardwood country lies south of latitude 43°, and consists of very fertile sand, clay, or loam, mostly cleared of the original forest, and largely cultivated.

The sandy or stony drift of many river valleys in this section supports a heavy growth of oak, frequently interspersed with walnut and hickory, while the margins of the streams, and the neighboring swamps, abound in soft maples, swamp and chestnut oak, white and black ash, elm, hackberry, sycamore, butternut, and similar trees. Willows, dogwoods, viburnums, and buttonbush, are common shrubs in the swamps; and hazel, hawthorn, wild cherry and plum, June berry, witch-hazel, etc., are abundant on the dryer ground.

On the uplands, and away from streams, clay, loam, and a peculiar black-muck soil, supersede the sands and gravels of the valleys. The prevailing timber here is beech and maple and oak forest in about equal proportions. Beech and maple (*Acer saccharinum* and var. *nigrum*) generally grow together, forming magnificent forests of great extent. The best wheat farms are usually found on uplands near streams, where the oak timber gradually shades into beech and maple. Plains of fertile sand covered with a low, or scattering growth of oak (oak openings) are frequent, and always very desirable for farming purposes. Four species of oak are usually found on such plains—*Q. alba*, *macrocarpa*, *coccinea*, and *tinctoria*.

Marshes densely covered with tamarack are common in this part of the State, and nourish in their thick shade such plants as *Drosera rotundifolia*, *Sarracenia purpurea*, *Rhus venenata*, *Ribes rubrum*, *Chiogenes hispidula*, *Salix candida*, *Smilacina trifolia*, *Pogonia ophioglossoides* and *Calopogon pulchellum*. Arborvitæ, red cedar and black spruce are comparatively rare.

A similar tract of soil and timber occurs in the upper end of the Peninsula, north of a line drawn from Thunder Bay west to the head of Grand Traverse Bay. This is commonly known as the "Traverse Region," and has a flora much like that we have just described, with the exception that some of the southern species disappear, and northern ones begin to take their place, or if found growing further south, here first become frequent.

The littoral flora of Little Traverse Bay is rich in interesting species, among which may be mentioned a small form of *Cakile Americana*, *Lathyrus maritimus*, *Potentilla Anserina*, *Tanacetum Huronense*, *Artemisia Canadensis*, *Cnicus Pitcheri*, *Juncus Balticus*, *Triticum violaceum*, *T. dasycarpum*, a peculiar form of *Bromus ciliatus*, *Calamagrostis longifolia*, *C. arenaria*, and *Equisetum variegatum*. The flora of the low dunes at the head of the Bay comprises, among others, the following species: *Juniperus Sabina*, var. *procumbens*, *Prunus pumila* and *Cornus stolonifera*, half buried in the drifting sand, *Hypericum Kalmianum*, *Salix glaucophylla*, and varieties, *Lilium Philadelphicum*, etc. In a moist depression were found *Arabis lyrata*, *Coreopsis lanceolata*, *Arctostaphylos Uva-ursi*, *Primula farinosa*, *Lithospermum hirtum*, *Triglochin maritimum*, var. *altaum*, *Carex aurea*, *C. Oederi*, etc., etc. In thickets near the shore were found *Abies balsamea*, *Picea alba*, *Shepherdia Canadensis*, and *Rubus Nutkanus*. Deep forests of hemlock and yellow birch (*B. lutea*) mixed with a fine, tall growth of striped maple (*A. Pennsylvanicum*) are frequent, having underneath a tangled growth of *Taxus baccata*, var. *Canadensis*, and under all a carpet of *Lycopodium annotinum*. Alternating with these are sandy plains covered with a dense growth of *Vacciniums*, yielding a great abundance of fruit. Sugar maples and basswood are also abundant in this region, and reach an immense size. In fact, finer groves of maple it would be difficult to find in any part of the State.

The pine country proper lies between the two tracts we have described, and embraces about 15,000 square miles. It is composed largely of sand hills and plains, either scantily furnished with vegetation, or densely covered with pine forest. Argillaceous tracts wooded with beech and maple also occur, like oases in a desert; and swamps abound, with the usual lowland timber. Forests of hemlock spruce are frequent, and there are occasional ridges of oak. Birch (*B. lutea*) also begins to be a common forest tree, and attains a large size. The usual timber of the barrens is Jack Pine (*P. Banksiana*). Climatic and other influences have combined to produce groves composed entirely of this species of large size and of great beauty, for, instead of being "a straggling shrub, or low tree" (Gray), it rises, often 50-60 feet, straight and symmetrical. All through this region *Pinus strobus* is the prevailing species and furnishes most of the lumber, but *P. resinosa* is frequent as far south as Clare county, and occurs sparingly in the northern part of Isabella county, which appears to be its southern limit.

Such is the general character of the sylvia down to about latitude 43°, but in the western part of the State, owing perhaps to moister climate, or to favorable soil, hemlock spruce is more abundant, and reaches much farther south, nearly or quite to the Indiana line, and the same is true of white pine.

Portions of the counties of Clare, Missaukee, and Roscommon represent an undulating plateau, which is 700-800 feet above the level of the great lakes,

and has an interesting flora, as yet little studied. This region was examined in June, 1876, and revealed a number of northern plants. In the southern part of Clare county were found *Ledum latifolium*, *Kalmia glauca*, *Physalis grandiflora* (not before found south of the Upper Peninsula), *Corydalis glauca*, and *Geranium Carolinianum*,—the two latter species growing luxuriantly in the deep woods, after fires. In the shade of the Jack Pines grew *Prunus pumila*, *Potentilla tridentata* (not before observed in Lower Peninsula), *Krigia Virginica*, *Arctostaphylos Uva-ursi*, *Linaria Canadensis*, *Kaleria cristata*, *Carex Houghtonii*, etc., etc. Near Houghton Lake were found *Adlumia cirrhosa*, *Ribes lacustre*, *Dracocephalum parviflorum*, *Streptopus roseus*, and *S. amplexifolius*; and in Muskegon river, near its source, *Potamogeton lucens*. *Pinus resinosa* was noticed frequently, growing with common pine, and near the center of Clare county it became more abundant, forming groups. Single individuals stretch upwards 150–160 feet, their clean, copper-colored boles often rising 100 feet to the first limbs.

The flora of the deep pine woods is interesting, though rather monotonous. Very little undergrowth is found, and their gloomy recesses nourish only such plants as love thick shade. Here the club-mosses (*Lycopodiums*) find a congenial home, and flourish luxuriantly, while *Clintonia borealis* covers the ground. The great round-leaved orchid (*Habenaria orbiculata*), with its tall, greenish spike and twin leaves close to the earth, is also frequent and striking. We shall also meet *Mitchella repens*, *Smilacina bifolia*, *Trillium grandiflorum*, perhaps, and a few ferns, particularly *Asplenium Filix-femina*, and *Phegopteris Dryopteris*. Other species occur, of course, but not so abundantly. In more open places, and on ridges, we meet *Rhus aromatica* and *Comptonia* along with wintergreen (*Gaultheria*) and trailing arbutus (*Epigea*), and are often fortunate enough to find the wax-white, fragrant flower of *Moneses uniflora*, or *Polygala paucifolia*, hiding its shining leaves under a wealth of showy pink blossoms.

The floral treasures of the pine region lie, however, in its swamps and lake borders rather than in the deep woods. Therein grows *Linnea borealis* in all its delicate beauty, carpeting the ground, and close at hand, the odd, brown-purple flower of *Cypripedium acaule* and the small yellow blossom of its water-loving relative *C. parviflorum*. In such swamps, or within a stone's throw of them, may be found many other plants of equal interest, such as *Medeola Virginica*, *Ledum latifolium*, *Andromeda polifolia*, *Kalmia glauca*, *Lonicera oblongifolia*, *Cardamine pratensis*, *Gerardia aspera*, *Mitella nuda*, *Eriophorum vaginatum*, etc. On lake margins we shall find *Lysimachia* and the blue *Pontederia* and more rarely, *Nesaea* and *Eleocharis quadrangulata*. The lake itself, most likely, will be full of *Nymphaea*, *Nuphar*, *Utricularias*, and a world of *Potamogetons* and similar water weeds. Shrubby *Vacciniums* line the bluffs, and here and there gleam the white trunks of paper birches against the dark background of pines.

In the thick-pine country, where the lumberman's axe has let in the sunlight, new plants spring up freely. Here, *Prunus Pennsylvanica* and poplars are frequent, and the blackberry is omnipresent. *Aralia hispida* and *Physalis pubescens* are also peculiar to such land, and in August *Gnaphalium decurrens* may be seen whitening thousands of acres.

One seldom beholds a drearier sight than a dead and deserted lumber region. The valuable trees were all felled years ago, and the lumberman moved on to fresh spoils, leaving behind an inextricably confused mass of tree tops, broken logs, and uprooted trunks. Blackberry canes spring up

everywhere, forming a tangled thicket, and a few scattering poplars, birches, and cherries serve for arboreal life, above which tower the dead pines, bleached in the weather and blackened by fire, destitute of limbs, and looking at a distance not unlike the masts of some great harbor. Thousands of such acres, repellant alike to botanist and settler, can be seen in any of our northern counties.

In certain districts considerable beech is found associated with the pine. The soil of such tracts is usually of better quality, and can be rendered productive without much labor. It may be noted that in such cases the pine also grows thriftier and makes better lumber.

Sections of this and the Traverse region of Michigan are still sparsely settled, or not at all, and have been visited rarely by botanists. Consequently, we may expect many additions to our flora, as well as corrections, when this region is as thoroughly known as the south half of the State now is; our ignorance, rather than nature's parsimony, explaining why we have so few species credited to us. The most promising field for the botanist evidently lies in the Houghton Lake region and northward, and in the Upper Peninsula, many parts of the interior of which are botanically unknown.

Our flora, as here presented, contains in all 113 families (orders) and 1,634 species. The composites claim the largest number of species, 182—about one-ninth of all. Sedges follow with 176 species; grasses, 139; rosaceæ, 61; ferns, 56; leguminosæ, 55; figworts, 46; mints, 40; mustard and crowfoot, 39 each; heath family, 35, and umbelliferæ, 27. We have 165 trees and shrubs, about 20 of which are valuable timber trees. At least 40 of our trees and shrubs are worthy of cultivation for ornament. Sugar maples and elms are commonly planted, while the tulip tree, basswood, Kentucky coffee tree, black walnut, and butternut, among deciduous trees, and hemlock, white pine, black spruce, arbor vitæ, and red cedar, among evergreens, deserve more attention. About 20 species of woody and herbaceous native climbers are frequent, and some are worthy of cultivation, (see State Pomological Report of '79 for a list.) Ninety medicinal plants are admitted into the U. S. Pharmacopœia, 45 belonging to the primary list, and an equal number to the secondary, while a number of others deserve attention at the hands of Pharmacists. (See papers previously noted.)

It may be stated in conclusion that, in the preparation of this catalogue, we have spared no pains to make it thoroughly reliable, a majority of the species enumerated having passed through our hands, and the remainder being admitted only on good authority. We have preferred to make a *useful* rather than a *large* catalogue, and, on this ground, we have rejected a number of species, some of which may yet make good their claim to be considered as part of our flora. We cannot hope to have escaped all errors, and crave charitable judgment for any such the kind reader may discover, trusting that they may be found errors of omission rather than of commission.

In our arrangement of orders, we have preferred, as more convenient, to follow the 5th edition of Gray's Manual rather than later works. The vexatious subject of synonymy has received considerable attention, and will, we believe, be found brought down nearly to date. Further observations will be published from time to time in the form of addenda, towards increase of which we solicit correspondence and contributions from all parts of the State.

Ionia, Mich., January 30, 1881.

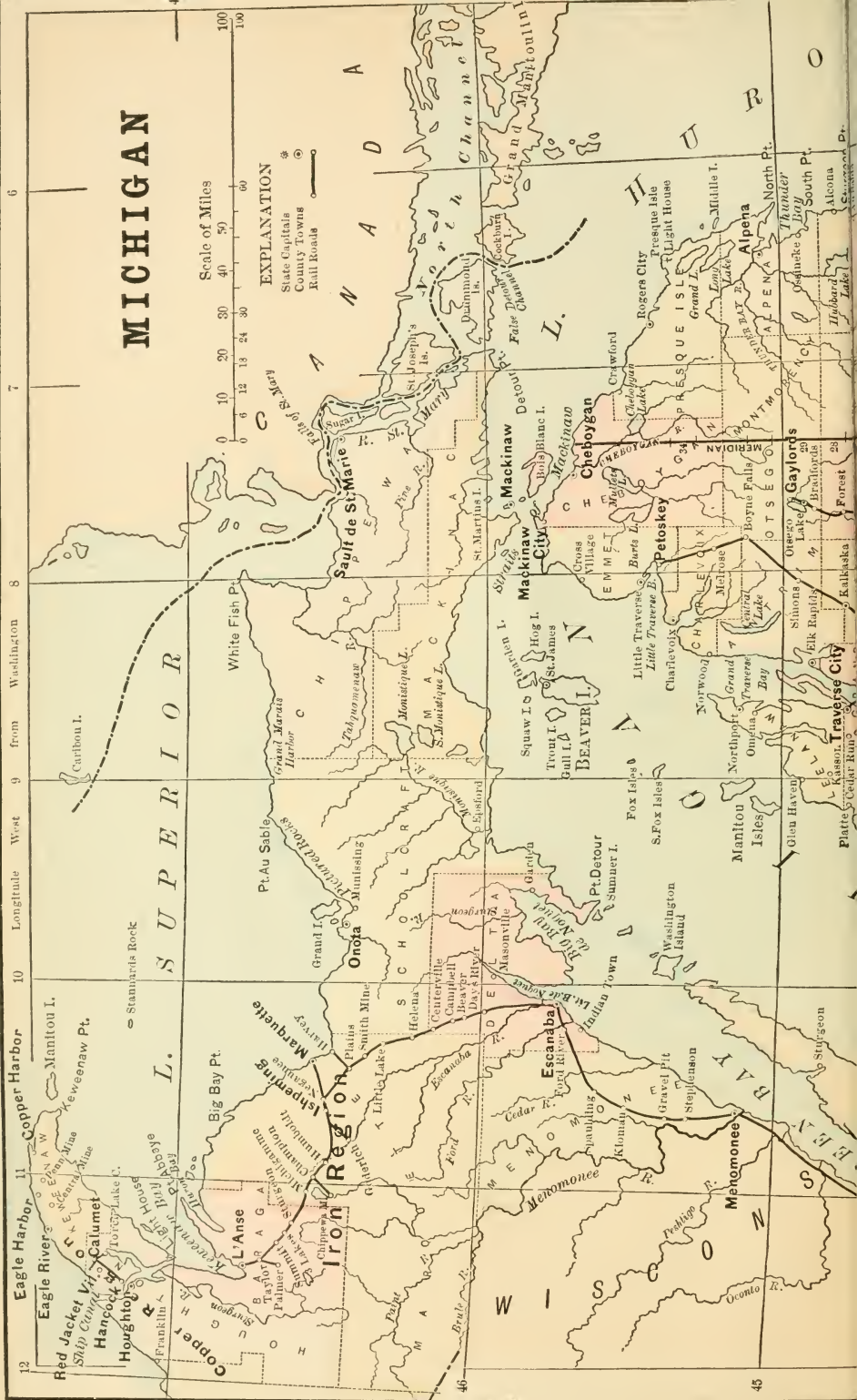
MICHIGAN

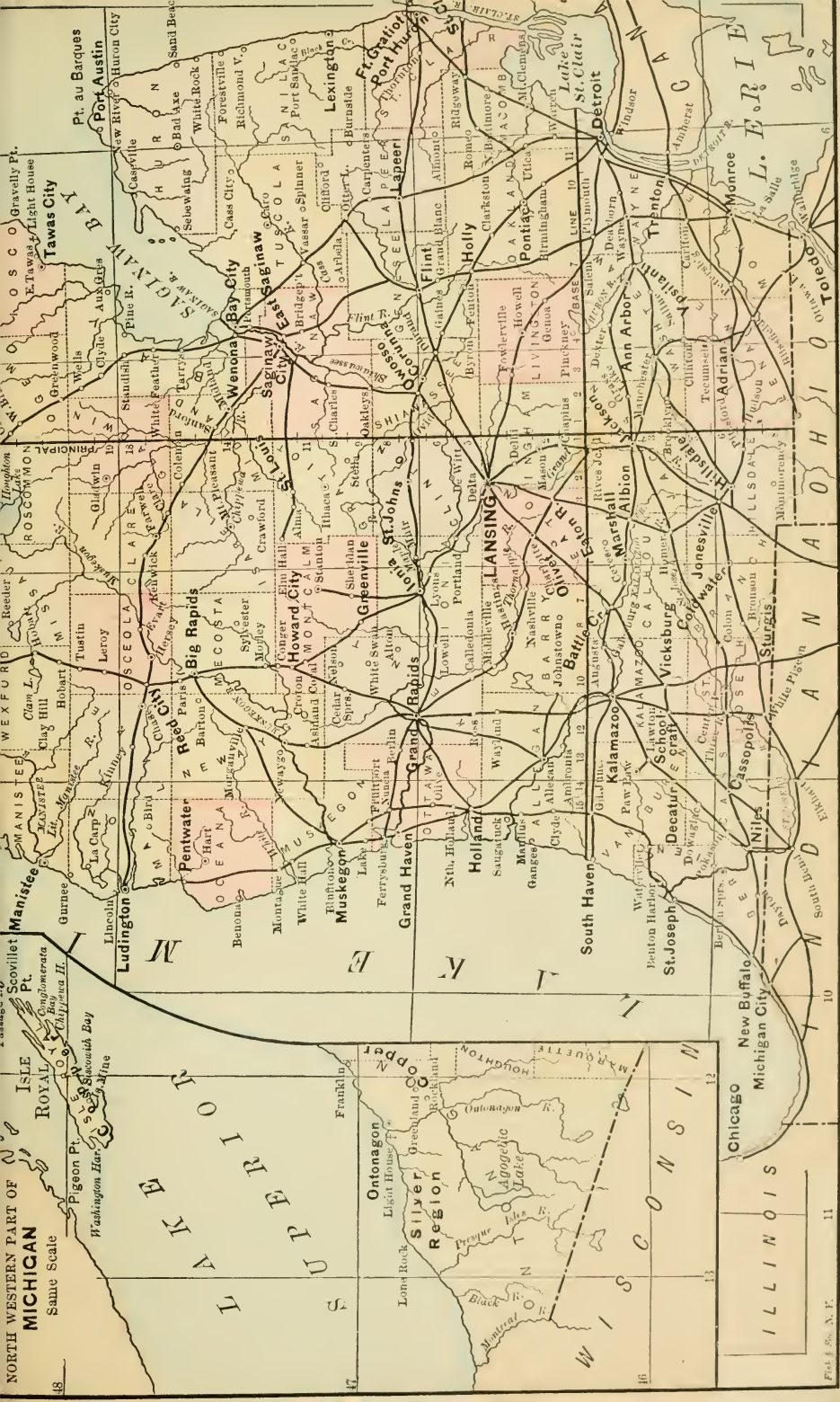
Scale of Miles



EXPLANATION

- State Capitals
- County Towns
- Rail Roads





CATALOGUE.

Range of species north or south, when known, has been indicated by the following abbreviations in bold type at the right: S.—1st, 2d, and 3d tier of counties. C.—From 3d tier of counties northward to Houghton Lake region. N.—Remainder of the Lower Peninsula. L. P.—Lower Peninsula. U. P.—Upper Peninsula. Th.—Whole State so far as known. In a few instances S. E. and S. W. have been used, indicating the southeastern and southwestern slope of the Lower Peninsula. In case of rare or local species, we have given all the localities known, but for more common ones have usually indicated only the range and relative frequency. Throughout the catalogue: H. refers to Hubbardston, situated on Fish Creek, in the extreme northeastern part of Ionia Co.; Flint,—Dr. Clarke's List; Macomb Co.,—Dr. Cooley's MS. Cat.; So. Haven,—L. H. Bailey's List; Kalamazoo,—F. H. Tuthill; Detroit,—Dr. A. B. Lyons. Other abbreviations of this nature as Winch. Cat., Wr. Cat., Allmond. Cat., etc., will be readily understood from the preface. The (!) used after rare or local species indicates that we have collected the plant in the locality given, or have received it from others. A mark of doubt (?) follows a few species which we have introduced with some hesitation and on the authority of others. In most cases such species have been dropped altogether. Medicinal plants have been indicated by asterisks as follows: Those belonging to the Primary List of the U. S. Pharmacopœia (*); Secondary List (**); not official but in use, or worthy of trial (***). Introduced species are given in *Italics*, and are chiefly weeds from the Old World.

 RANUNCULACEÆ.

(*Crowfoot Family.*)

CLEMATIS

- | | | |
|-----------------|---------------------------------|--|
| Virgin's Bower. | 1. <i>Virginiana</i> , L. (***) | Th. Sometimes cultivated as a climber. The plumose white fruit ornamental. Common. |
|-----------------|---------------------------------|--|

ANEMONE

- | | | |
|--|-------------------------------|---|
| Small-flow-ered A. | 2. <i>parviflora</i> , Mx. | U. P. Dr. Lyons; Asa Gray. |
| Long-fruited A. | 3. <i>cylindrica</i> , Gray. | L. P. Infrequent. |
| Virginian A. | 4. <i>Virginiana</i> , L. | Th. Frequent. |
| Many-cleft A. | 5. <i>multifida</i> , Poir. | Mackinaw,—Whitney Cat.; mouth of Saginaw R. Winchell Cat.; Lake Superior,—Gray. Rare. |
| Pennsylvania- nian Anem- one. | 6. <i>dichotoma</i> , L. | Th. On low ground along streams, and worthy of cultivation. The handsome, white flowers are sometimes over two-inches in diameter, and the size could probably be increased by cultivation. Common. |
| Wind Flower. Wood Anem- one. | 7. <i>nemorosa</i> , L. (***) | Th. Early and very pretty. Flowers sometimes bright rose color. Common. |
| Liverleaf. Acute-lobed Hepatica. | 8. <i>acutiloba</i> , Lawson. | S. C. & N. (?) This species is very common on beech and maple land, while <i>A. Hepatica</i> prefers oak soil. No transition forms have been seen. |
| Liverleaf. Round-lobed Hepatica. | 9. <i>Hepatica</i> , L. | Th. Less frequent than the preceding, at least in the center. |

THALICTRUM

- | | | |
|-------------------|------------------------------|--|
| Rue Anem- one. | 10. <i>anemonoides</i> , Mx. | S. & C. Quite local through the center. Flowers very pretty, white, sometimes pink. Found usually on oak soil. |
|-------------------|------------------------------|--|

- Early Meadow Rue. 11. *dioicum*, L. Th.
Early. Worth cultivating for its delicate, glaucous-green foliage. Common.
- Purplish M. Rue. 12. *purpurascens*, L. Th.
The flowers vary from white to deep purple, the fertile ones occasionally bearing stamens as in the next. Wet meadows. Common.
- Tall M. Rue. 13. *Cornuti*, L. Th.
Often confounded with the preceding. Frequent.

RANUNCULUS

- Stiff Water Crowfoot. 14. *aquatilis*, L., var. *stagnatilis*, DC. Th.
Bear River, Petoskey—E. J. Hill; Ann Arbor—Allmendinger Cat.; Huron R.—Lyons; etc. Infrequent.
- White Water Crowfoot. 15. *aquatilis*, L., var. *trichophyllus*, Chaix. Th.
Common.
- Yellow Water Crowfoot. 16. *multifidus*, Ph. Th.
Flowers an inch and three-eighths in diameter and full—double have been seen. Ponds and slow streams. Very common.
17. *multifidus*, Ph., var. *terrestris*, Gr.
Ann Arbor,—Miss Clark.
- W. Plantain Spearwort. 18. *ambigens*, Watson. Th.
Dr. Lyons. Not observed in C. & S.
- Creeping Spearwort. 19. *flammula*, L., var. *reptans*, Meyer. Th.
Infrequent except northward, and not seen in the center of the State.
- Early Crow-foot. 20. *rhomboideus*, Goldie. Th.
On light sand; our earliest spring flower. Muir and Palo in Ionia county (!); Lake Superior.—Can. Cat. "Prairies, Mich."—Gray. Rare.
- Spring Crow-foot. 21. *abortivus*, L. Th.
Common.
- Small-flow-ered C. 22. *abortivus*, L., var. *micranthus*, Gr. Th.
- Cursed C. 23. *sceleratus*, L. (***) Th.
Ditches and low ground. Exceedingly variable, stems sometimes two inches in diameter. Frequent.
- Hooked C. 24. *recurvatus*, Poir. Th.
Woods in rich soil. Common.
- Bristly C. 25. *Pennsylvanicus*, L. Th.
Frequent.
- Early C. 26. *fascicularis*, Muhl. Th.
Pretty and worth trying in the garden. Flowers sometimes double, or with reversion of essential organs to leaves. Hills and sandy plains. Common.
- Creeping C. 27. *repens*, L. (***) Th.
Wet places. Very common.
- Butter-cups. 28. *acris*, L. (***) Th.
"Classed by Hooker f. as indigenous,"—Watson. So. Haven; Macomb Co.; Flint; Huron shore—Winch. Cat.; and Lake Superior. Infrequent.

ISOPYRUM

- Isopyrum. 29. *bitermum*, T. & Gr. (***) C. & S.
False Rue. Early and pretty. Often mistaken for Rue Anemone, from which the Anemone. latter is easily distinguished by its dahlia-like roots. Very common on "beech and maple" land, but not on oak.

CALTHA

- Marsh Mari-gold. 30. *palustris*, L. Th.
In swamps. Frequently called "Cowslip," and eaten in spring for greens. Very common.

TROLLIUS

- Globe-flower. 31. *laxus*, Salisb.
 "Deep swamps, Mich."—Gray.

Very rare.

COPTIS

- Goldthread. 32. *trifolia*, Salisb. (✱)
 Bogs and coniferous woods.

Th.

Common.

AQUILEGIA

- Wild Colum- 33. *Canadensis*, L.

Th.

A stately plant, desirable for cultivation on account of its large, scarlet
 and yellow flowers. Common.

DELPHINIUM

- Tall Lark- 34. *exaltatum*, Ait. (***)

S.

"Michigan and southward."—Gray. S. Michigan is probably the northern
 limit of this species east of the Mississippi. Rare.

HYDRASTIS

- Yellow Puc- 35. *Canadensis*, L. (*)

C. & S.

Rich, moist woods. Rather local.

coon. Orange-
 root. Golden
 Seal.

ACTÆA

- White Bane- 36. *alba*, Bigelow. (***)

Th.

Moist woods and hillsides.

Abundant.

- Red Bane- 37. *spicata*, L., var. *rubra*, Aiton. (***)

Less frequent than the preceding. Berries of both are ornamental.

berry.

CIMICIFUGA

- Black Snake- 38. *racemosa*, Nutt. (*)

S.

root.
 Black Cohosh.

S. E.—Winch. Cat.; U. P.—Burt. (?). Rare in Michigan, and probably
 does not get much beyond Northern Ohio.

NIGELLA

- Fennel- 39. *Damascena*, L. (***)

Escaped from gardens.

Infrequent.

flower.

MAGNOLIACEÆ.

(*Magnolia Family.*)

LIRIODENDRON

- White-wood. 40. *Tulipifera*, L. (**)

C. & S.

Tulip-tree.

A medium sized tree, frequent at Ionia (!), Saranac (!), Lansing (!), and
 southward, but not seen north of Grand river valley. This is one of our
 finest native trees, valuable alike for lumber and ornamental purposes.
 Formerly common but becoming

Infrequent.

ANONACEÆ.

(*Custard-Apple Family.*)

ASIMINA

- Pawpaw. 41. *triloba*, Dunal. (***)

C. & S.

A low tree, fruit scarcely edible. Abundant in the valleys of Grand and
 Maple rivers, where it probably reaches its N. limit. Common south-
 ward.

MENISPERMACEÆ.

(*Moonseed Family.*)

MENISPERMUM

- Moonseed. 42. *Canadense*, L. (***)

C. & S.

Woods and moist thickets.

Common.

BERBERIDACEÆ.

(Barberry Family.)

BERBERIS

- Common Bar- 43. vulgaris, L. (**) Rare.
berry. Flint, etc.

CAULOPHYLLUM

- Blue Cohosh. 44. thalictroides, Mx. (***) Th.
Common in L. P.

JEFFERSONIA

- Twin-leaf. 45. diphylla, Persoon. (***) C. & S.
Rheumatism- An early spring plant. Worth cultivating for its white flowers and curi-
root. ous biparted leaves. Infrequent.

PODOPHYLLUM

- Mandrake. 46. peltatum, L. (*) C. & S.
May-apple. Roots drastic, an article of commerce. Ripe fruit often eaten.
Very common.

NYMPHÆACEÆ.

(Water-Lily Family.)

BRASENIA

- Water-shield. 47. peltata, Pursh. C. & S.
Greenville (!), Ionia (!), Lansing (!), Ann Arbor, etc. Infrequent.

NELUMBium

- Rattle-box. 48. luteum, Willd. S.
Yellow Nel- River Rouge, south of Detroit; Indian Lake, 12 miles southeast of Kala-
umbo. mazoo; Monroe county, where it is abundant; and probably in other
Water Chinq- places. Seems to be indigenous. Local.
uepin.

NYMPHÆA

- Sweet-scented 49. odorata, Aiton. (***)
Water-Lily. Said to grow at Ann Arbor—Allmend. Cat.—and in Lake Superior region,
but the next has probably been mistaken for it, unless the two run
together.

- White Water- 50. tuberosa, Paine. (***) C. & S.
Lily. In all our ponds and slow streams. Flowers large and delicately beauti-
ful, fragrant; often used for decorating in connection with evergreens.
Easily propagated from the tubers, and desirable for large aquariums
in grounds. Common.

NUPHAR

- Spatter Dock. 51. advena, Aiton. (***) Th.
Yellow Pond- In company with water-lilies, but always a dirty plant—seeming to de-
Lily. light in filth. Common.
Small Yellow 52. pumilum, Smith. C. & S.
Pond Lilly. "Sag. Bay & S. W."—Winch. Cat. Infrequent.

SARRACENIACEÆ.

(Pitcher-Plants.)

SARRACENIA

- Pitcher Plant. 53. purpurea, L. (***)
Common in sphagnous swamps. Can be grown in the house, where it
always attracts attention as a "curiosity," though all the swamps in
the neighborhood be full of it.

PAPAVERACEÆ.

(Poppy Family.)

Mexican ARGEMONE

Poppy. 54. *Mexicana*, L. (***)

Prickly P. CHELIDONIUM

Celandine. 55. *majus*, L. (***)

PAPAVÉR

Common 56. *sonniferum*, L. (*)

Poppy. These three plants occur in some localities, but are scarcely well enough established to deserve mention.

SANGUINARIA

Blood-root. 57. *Canadensis*, L. (*)

Th.

The white flowers appear in early spring, and are sometimes $2\frac{1}{2}$ inches in diameter. Does well in gardens, and is pretty. Common.

STYLOPHORUM

Yellow 58. *diphyllum*, Nutt. (***)

C. & S.

Poppy.
Celandine
Poppy.

Rich woods in Oceana, Ionia, Clinton, Ingham, and other counties. Flower orange-yellow, over two inches in diameter. Deserves a place in the garden. Rare or Local.

FUMARIACEÆ.

(Fumitory Family.)

ADLUMIA.

Climbing 59. *cirrrosa*, Raf.

C. & S.

Fumitory.

Hemlock woods in vicinity of Houghton Lake; Grand Rapids, —Miss Clark So. Haven; etc.; also in cultivation. Not. com.

CORYDALIS.

Golden 60. *aurea*, Willd.

Th.

Corydalis.

Not noticed in the center of the L. P., where the next is also rare; frequent northward; in the U. P., common.

Pale C. 61. *glauca*, Pursh.

Th.

Grand Haven(!); Clare Co.(!); L. Sup., etc. Infrequent except northward.

DICENTRA.

Squirrel Corn. 62. *Canadensis*, DC. (***)

C. & S.

Dutchman's 63. *cucullaria*, DC. (***)

C. & S.

Breeches

Both sp. common.

CRUCIFERÆ.

(Mustard Family.)

ALYSSUM.

Alyssum. 64. *calycinum*, L.

C. & S.

Hubbardston (!); Ionia (!); Flint; Lansing (!), etc.; a recently introduced plant, becoming common in many localities. Door-yards and waste places.

ARABIS.

Rock Cress. 65. *dentata*, T. & Gr.

C. & S.

Low lands along Grand R. (!) and southward.

Not common.

Rock C. 66. *lyrata*, L.

Th.

So. Haven; Flint; Petoskey (!); U. P.—Whitney Cat.

Infrequent.

Rock C. 67. *petraea*, Lam.

Th.

Isle Royal—Gillman; Mackinac; Macomb Co.; Gd. Haven; etc.

Infrequent.

| | | |
|-------------------------------|---|------------------------|
| Hairy Rock C. | 68. <i>hirsuta</i> , Scop. | Th. Frequent. |
| Smooth Rock C. | 69. <i>lævigata</i> , Poir. | Th. Infrequent. |
| Canada Cress. Sickle-Pod. | 70. <i>Canadensis</i> , L. Fields and rocky woods. | C. & S. Common. |
| Tower Mustard. | 71. <i>perfoliata</i> , Lam. | Th. Not rare. |
| Drummond's M. | 72. <i>Drummondii</i> , Gr. Hubbardston(!); Flint; Macomb Co.; etc. Dry banks. | Th. Not com. |
| BARBAREA | | |
| Yellow Rock-et. Winter Cress. | 73. <i>vulgaris</i> , R. Br. So. Haven; Ann Arbor—Allmendinger Cat.; Macomb Co.; Hubbardston(!); and N. into the U. P., where it is indigenous and frequent. | Th. |
| BRASSICA | | |
| White Mustard. | 74. <i>alba</i> , Gr. (*) | C. & S. Infrequent. |
| Charlock. | 75. <i>Sinapistrum</i> , Boiss. | Th. Not com. |
| Black Mustard. | 76. <i>nigra</i> , Koch. (*) | C. & S. Common. |
| CAKILE | | |
| Sea Rocket. | 77. <i>Americana</i> , Nutt. Shores of the Gr. Lakes. | Th. Common. |
| CAPSELLA | | |
| Shepherd's Purse. | 78. <i>Bursa-pastoris</i> , Mœnch. (***) The commonest of weeds. | Th. |
| CARDAMINE | | |
| Spring Cress. | 79. <i>rhomboidea</i> , DC. | Th. Common. |
| Purple Spring C. | 80. <i>purpurea</i> , Cham. & Schlecht. An early spring flower. | Th. Common. |
| Cuckoo Flower. | 81. <i>pratensis</i> , L. (***) Bogs. Rare S., frequent in C., and common N. | Th. |
| Small Bitter Cress. | 82. <i>hirsuta</i> , L. | Th. Common. |
| Woodland B. C. | 83. <i>hirsuta</i> , L., var. <i>sylvatica</i> , Gr. Ann Arbor,—Winch. Cat.; and Flint. | C. & S. Infrequent |
| DENTARIA | | |
| Crinkle-root. Pepper-root. | 84. <i>diphylla</i> , Mx. (***) | Th. Common. |
| Tooth-wort. | 85. <i>laciniata</i> , Muhl. Probably occurs farther north if not throughout. | C. & S. Common. |
| DRABA | | |
| Whitlow-grass. | 86. <i>arabisans</i> , Mx. Shores of the Gr. Lakes. | Th. Infrequent. |
| Whitlow-grass. | 87. <i>nemorosa</i> , L. "Fort Gratiot and northwestward,"—Gray. Collected by Dr. Pitcher. | Th. Infrequent. |
| Whitlow-grass. | 88. <i>Caroliniana</i> , Walt. Ionia Co. (!), and southward. | C. & S. Rare. |
| Whitlow-grass. | 89. <i>verna</i> , L. Dr. Lyons. | S. Rare. |

LEPIDIUM

- Wild Pepper-grass. 90. *Virginicum*, L. Th.
 Wild P.-grass. 91. *intermedium*, Gr. Th.
 This and the preceding are both very common in fields and waste places, but usually not together.
 Pepper-wort. 92. *campestre*, R. Br. S. E.
 Macomb Co., and Detroit. Infrequent.

NASTURTIUM

- True Water-Cress. 93. *officinale*, R. Br. (***) C. & S.
 Ionia(!); Ann Arbor; South Haven; etc. Frequent in brooks.
 Marsh Cress. 94. *palustre*, DC. (***) Th.
 Frequent.
 Hairy M. Cress. 95. *palustre*, DC., var. *hispidum*, Fisch. & Mey. Th.
 Lake Cress. 96. *lacustre*, Gr. C. & S.
 From Fish Cr. (!) and Maple R. (!) southward. Frequent.
 Horseradish. 97. *Armoracia*, Fries. (***)
 Used in spring as a condiment. Escaped from gardens into waste places. Frequent.

SISYMBRIUM

- Hedge Mustard. 98. *officinale*, Scop. (***) Frequent.
 Road-sides and wet places.
 Mouse-ear Cress. 99. *Thaliana*, Gay. C. & S.
 In light sand; generally mistaken for *Arabis lyrata*. Common.
 Tansy Mustard. 100. *canescens*, Nutt. Th.
 Shores of Gr. Lakes, etc. Pitcher, Houghton, Winchell, *et al.* Infrequent.

CAMELINA

- False Flax. 101. *sativa*, Crantz. C. & S.
 Road-sides and waste places. Flint; Ann Arbor; Macomb Co.; etc. Not common.

THALASPI

- Penny Cress. 102. *arvense*, L. S. E.
 Ann Arbor—Allmend Cat.; "Shores of Lake Huron."—Gray. Rare.

CAPARIDACEÆ.

(Caper Family.)

POLANISIA

- Polonisia. 103. *graveolens*, Raf. S.
 Shores of Gr. Lakes; South Haven; Detroit (!); Put-in Bay (!), etc. Not rare.

VIOLACEÆ.

(Violet Family.)

IONIDIUM

- Green Violet. 104. *concolor*, Benth. & Hook. C. & S.
 Hubbardston(!); Lansing—Beal; Ann Arbor,—Allm. Cat.; etc. Scarce and local.

VIOLA

- Round-leaved Violet. 105. *rotundifolia*, Mx. U. P.
 Sugar Island—Winch. Cat.; Michigan—Gray.
 Selkirk's V. 106. *Selkirkii*, Pursh. U. P.
 Great-spurred V. Gillman, Gray, *et al.* A high northern plant.

| | | |
|-------------------|---|-----------------------------|
| Sweet White V. | 107. blanda, Willd. | Th. Common and variable. |
| Lance-leaved V. | 108. lanceolata, L. Roscommon Co.(!); L. Sup.; etc. | Rare. |
| Common Blue V. | 109. cucullata, Aiton. | Th. Common and variable. |
| Hard-leaf V. | 110. cucullata, Ait., var. palmata, Gr. Frequent on hills about Ionia.(!) | |
| Arrow-leaved V. | 111. sagittata, Aiton. | C. & S. |
| Larkspur V. | 112. delphinifolia, Nutt.(?) | S. |
| Bird-foot V. | 113. pedata, L. (**) Common on light sand, our finest species. Does nicely in cultivation and deserves attention. The flowers are light blue, or very rarely pure white, and are very pretty, being often $1\frac{1}{2}$ in. in diameter. N. to "British Am., lat. 55°."—Torr. & Gr., Fl. N. Am. | Th. |
| Dog Violet. | 114. canina, L., var. sylvestris, Regel. | Th. Common. |
| Long-spurred V. | 115. rostrata, Muhl. Well distributed and frequent. | C. & S. |
| Pale V. | 116. striata, Aiton. | C. & S. Common. |
| Canada V. | 117. Canadensis, L. Abundant on "beech and maple" land, but seldom, or never, under oaks. | Th. |
| Downy Yellow V. | 118. pubescens, Aiton. | Th. Common. |
| Hairy Yellow V. | 119. pubescens, Ait., var. eriocarpa, Nutt. | Th. Common. |
| Woolly-fruited V. | 120. glabella, Nutt. | C. & S. |
| Smoother Y. V. | Hubbardston(!); etc. | Infr. |

CISTACEÆ.

(Rock-rose Family.)

| | | |
|----------------------------|---|------------------|
| Frost-weed. Frost-wort. | 121. Canadense, Mx. (**) | Th. Frequent. |
| Hudsonia. | 122. tomentosa, Nutt. "Shores of Gr. Lakes."—Gray; S. Mich.—Winch. Cat.; L. Sup.—Can. Cat. | Th. Infr. |
| Pinweed. | 123. major, Mx. Common on poor soil. | C. & S. |

DROSERACEÆ.

(Sundew Family.)

| | | |
|----------------------|---|--------------------|
| Round-leaved Sundew. | 124. rotundifolia, L. (***) In sphagnum swamps. An insectivorous plant. | Th. Common. |
| Sundew. | 125. intermedia, Drev. & Hayne, var. Americana, DC. S. Mich.—Wright Cat.; Ann Arbor—Allmend. Cat.; L. Sup.—Can. Cat. | Th. Infrequent. |
| Slender S. | 126. linearis, Goldie. Dr. Lyons; L. Sup.—Can. Cat. | U. P. |

HYPERICACEÆ.

(St. John's-wort Family.)

HYPERICUM

- Great St. John's-wort. 127. *pyramidatum*, Aiton. Th.
 South Haven; Ann Arbor; Ft. Gratiot; Macomb Co.; Ionia (!); Stanton (!); Hubbardston (!); Crystal Lk. (!); Flint; Ontonagon River—Whitney Cat. Occurs at wide intervals and in small patches. Rare.
- Kalm's St. J. 128. *Kalmianum*, L. Th.
 Along the lakes; more common northward. S. Mich.—Wright Cat.; Fort Gratiot—Winch. Cat.; Petoskey (!); etc.
- Shrubby St. J. 129. *prolificum*, L. Th.
 A low, compact shrub, with a profusion of bright yellow blossoms, from July to Sept. Sometimes cultivated, and worthy of more notice as a hardy flowering shrub. Frequent from C. southward.
- St. John's-wort. 130. *ellipticum*, Hook. Th.
 Ann Arbor—Miss Clark; L. Sup.—Gray. Infrequent.
- Common St. J. 131. *perforatum*, L. (***) C. & S.
 Ionia (!); Lansing (!); Flint; etc. A bad weed in the Eastern States, but not troublesome in Michigan. Infrequent.
- St. John's-wort. 132. *corymbosum*, Muhl. Th.
 Common.
- Slender St. J. 133. *multilum*, L. Th.
 Abundant.
- Canada St. J. 134. *Canadense*, L. Th.
 Ionia Co. (!); Macomb Co.; Flint; Drummond's Island—Winch. Cat. Occasional.
135. *Canadense*, L., var. *major*, Gray. Th.
 Flint; Fruitport and Old Mission.—E. J. Hill; L. Sup.—Gray.

ELODES

- Marsh St. John's-wort. 136. *Virginica*, Nutt. Th.
 Common.
- Marsh St. John's-wort. 137. *petiolata*, Ph. (?)
 Grosse Isle—Miss Clark in Winch. Cat.

CARYOPHYLLACEÆ.

(Pink Family.)

SAPONARIA

- Bouncing Bet. Soapwort. 138. *officinalis*, L. (***) L. P.
 Waste places and roadsides. Old Mission—E. J. Hill; and common in C. & S.
- Cow-Herb. 139. *vaccaria*, L. C. & S.
 Muir (!); S. Mich.—Wright Cat.; etc. Sparingly introduced.

SILENE

- Starry Cam-pion. 140. *stellata*, Aiton. S.
 Dr. Wright.
- Wild Pink. 141. *Pennsylvanica*, Mx. (?) S.
 Mont Lake—Miss Clark in Winch. Cat. We have specimens which were sent from Springfield, O., and the plant may grow in Mich.
- Fire Pink. Catchfly. 142. *Virginica*, L. S.
 Winchell Cat.
- Sleepy Catchfly. 143. *antirrhina*, L. Th.
 Common.
- Night flower-ing C. 144. *noctiflora*, L. C. & S.
 Common.

LYCHNIS

- Corn Cockle. 145. *Githago*, L. L. P.
In wheat-fields, but easily eradicated by sowing clean seed-wheat.
Common.

ARENARIA

- Thyme-leaved Sandwort. 146. *serpyllifolia*, L. Th.
Sandy fields. Not well distributed, but in places very common.
- Strict Sandwort. 147. *stricta*, Mx. Th.
S. Mich.—Wright Cat.; Macomb Co.; Montcalm Co. (!); L. Sup.—Can. Cat.
Infrequent.
- Showy Sandwort. 148. *lateriflora*, L. Th.
"From lat. 40° to the Arctic sea,"—Torrey & Gray, in "Flora N. Am."
Rather common in C., and quite pretty.

STELLARIA

- Chickweed. 149. *media*, Smith. Th.
Gardens and fields. A very abundant and hardy little weed, which has been seen in blossom every month in the year. In fact, even in mid-winter, a few warm days are enough to set it growing.
- Long-eared Stitchwort. 150. *longifolia*, Muhl. Th.
Common.
- Swamp S. 151. *uliginosa*, Murr. U. P.
Dr. Lyons. Infr.
- Starwort. 152. *crassifolia*, Ehrh. Rare.
Dr. Lyons.
- Northern S. 153. *borealis*, Bigelow. U. P.
Point au Barques, L. Huron, and Isle aux Traine, L. Sup.—Gillman; also, Gray in Manual, and Can. Cat. Infrequent.
- Long-stalked Stitchwort. 154. *longipes*, Goldie, N. & U. P.
"Gros Cap, L. Mich., abundant in pure sand."—Winch. Cat. Rare.

CERASTIUM

- Mouse-ear Chickweed. 155. *vulgatum*, L. Th.
Infrequent.
- Larger Mouse-ear C. 156. *viscosum*, L. Th.
Common.
- Nodding M. C. 157. *nutans*, Raf. Th.
Macomb Co.; Flint; Lyons(!), etc. Found on low grounds from Louisiana to Hudson's Bay. Rare.
- Field Chickweed. 158. *arvense*, L. Th.
S. Mich.—Winch. Cat.; L. Sup.—Can. Cat. Infrequent.

SAGINA

- Pearl-wort. 159. *nodosa*, E. Meyer. U. P.
"L. Sup. and northward."—Gray; Isle Royale.—Whitney's Cat.

SPERGULA

- Corn Spurry. 160. *arvensis*, L. C. & S.
Dr. Wright, Dr. Clark. Some other *Caryophyllaceous* plants occur, as *Dianthus* sp., *Silene*, *Armeria*, etc., but are not well established.
Adv. and rare.

PARONYCHIEÆ.

(Willow-worts.)

ANYCHIA

- Forked Chickweed. 161. *dichotoma*, Mx. S. W.
Dr. Wright. Infrequent.

SCLERANTHUS

- Knawel. 162. *annuus*, L.
Lansing (!); naturalized on the Agrl. College grounds.

PORTULACACEÆ.

(Purslane Family.)

PORTULACA

- Purslane. 163. *oleracea*, L. (***)
Pustley. Very tenacious of life—a vile weed in gardens. Very com.

CLAYTONIA

- Spring Beauty. 164. *Virginica*, L. Th.
Claytonia. An early and very pretty spring flower. Common.

MALVACEÆ.

(Mallow Family.)

MALVA

- Common 165. *rotundifolia*, L. (***) L. P.
Mallow. Common.
High M. 166. *sylvestris*, L. (***) L. P.
Occasional.
Curled M. 167. *crispa*, Gr.
Dr. Clark. Infrequent.
Musk M. 168. *moschata*, L. L. P.
Not rare.
Mallow. 169. *Alcea*, L.
Lansing (!); adventive on College grounds.

SIDA

- Sida. 170. *Napæa*, Cav. S.
Kalamazoo, R. R. track. Rare.

ABUTILON

- Indian Mal- 171. *Avicennæ*, Gært. C. & S.
low Velvet- Roadsides and river banks. Very common in places, and, along with
leaf. *Datura stramonium*, forming regular thickets. Sometimes cultivated,
but rather to be cast out as a bad weed.

HIBISCUS

- Swamp Rose— 172. *Moscheutos*, L. C. & S.
Mallow. Flint; and Put-in Bay, Lake Erie. (!) This plant, long neglected, is worthy
of cultivation. It is four feet high, with velvety leaves and beautiful
light rose-colored flowers, six inches in diameter. Rare.
Bladder Ket 173. *Trionum*, L. C. & S.
mia. S.—Dr. Wright; Ann Arbor—Winch. Cat.; and Flint. Rare.

TILIACEÆ.

(Linden Family.)

TILIA

- Basswood 174. *Americana*, L. Th.
Linden. Abundant in C. & S., common in Emmet Co. (!), and frequent in U. P.,
“especially in Ontonagon Valley.”—Whitney Cat. A valuable timber
tree, often planted for ornament, and much sought in flowering time
by bees for its copious nectar, which makes the finest honey. Basswood
lumber is much used in cabinet work for boxes, shelves, etc., whenever
a wood is desired which is soft and easily worked, and, at the same
time, tough and not liable to split.

LINACEÆ.

(Flax Family.)

LINUM

- | | | |
|--------------|--|-------------|
| Wild Flax. | 175. Virginianum, L. | S. |
| | Ann Arbor—Dr. Lyons; S. Mich.—Wright Cat. | Infrequent. |
| Wild Flax. | 176. sulcatum, Riddell. | S. |
| | Dr. Wright. | Rare. |
| Common Flax. | 177. usitatissimum, L. (*) | C. & S. |
| | Dr. Clark, and Dr. Wright. Escaped from cultivation. | Infrequent. |

GERANIACEÆ.

(Geranium Family.)

GERANIUM

- | | | |
|-------------------|--|------------|
| Wild Cranesbill. | 178. maculatum, L. (*) | C. & S. |
| | "Canada to Florida."—Torr. & Gr., Fl. N. Am. | Common. |
| Carolina C. | 179. Carolinianum, L. | Th. |
| | Macomb Co.; Clinton Co., etc. Rare in S. & C., abundant in vicinity of Farwell, Clare Co. (!), thence N. to L. Superior. | |
| Small-flowered C. | 180. pusillum, L. | |
| | Flint—Dr. Clark. | Adventive. |
| Herb Robert. | 181. Robertianum, L. (***) | Th. |
| | Put-in Bay, Lake Erie (!); Montcalm Co. (!); Saginaw Bay; Mackinac, and Drummond's Is.—Winch. Cat.; L. Sup.—Whitney's Cat. Common around the Gr. Lakes, but seldom seen in the interior. | |

ERODIUM

- | | | |
|-------------|--|---------|
| Storksbill. | 182. cicutarium, L'Her. (***) | C. & S. |
| | Oceana Co. (!); Ionia Co. (!); Kalamazoo, etc. Spreads rapidly—a bad weed in gardens and fields. Not yet common. | |

FLOERKEA

- | | | |
|---------------|---|--|
| False Mermaid | 183. proserpinacoides, Willd. | |
| | Ionia (!); Hubbardston (!); Flint, etc. Not rare but usually overlooked. A delicate, little herb in damp woods. | |

IMPATIENS

- | | | |
|--------------------|--|-----|
| Pale Touch-me-not. | 184. pallida, Nutt. (***) | Th. |
| | Macomb Co.; Ionia Co. (!); Sugar Is.—Winch. Cat., etc. Much rarer than the next. | |

- | | | |
|--------------------|-------------------------|-----|
| Spotted T. Balsam. | 185. fulva, Nutt. (***) | Th. |
| Jewel-weed. | | |

OXALIS

- | | | |
|---------------------------|---|---------|
| Common Wood-sorrel. | 186. Acetosella, L. (***) | Th. |
| | Macomb Co.; and "L. Sup. and northward"—Gray. Rare in S. Peninsula. | |
| Violet W. | 187. violacea, L. (***) | S. E. |
| | Winchell Cat. | Rare. |
| Yellow W. Ladies' Sorrel. | 188. corniculata, L., var. stricta, Sav. (***) | Th. |
| | Marquette Co.—Burt's MS., etc., etc. | Common. |

RUTACEÆ.

(Rue Family.)

ZANTHOXYLUM

- | | | |
|------------------------------|--|-------|
| Prickly Ash. Toothache Tree. | 189. Americanum, Mill. (***) | L. P. |
| | Everywhere along streams and on low ground. The bark enters into various "bitters," and is gathered in considerable quantities for export. | |

PTELEA

- Hop-tree, Shubby Trefoil, Wafer Ash. 190. *trifoliata*, L. (***) C. & S.
An interesting shrub; sometimes cultivated. Very abundant on the low, rocky islands in the western end of Lake Erie (!), and frequent along river banks and the shore of the Gr. Lakes. Occurs in the interior as far north as Montcalm Co. (!). Does not occur at Flint and is not mentioned in Dr. Cooley's MS. Cat., but is given by Dr. Wright.

ANACARDIACEÆ.

(Cashew Family.)

RHUS

- Staghorn Sumach. 191. *typhina*, L. (***) Th.
Seldom very large; less common than the next. Worth cultivating, and the next likewise.
- Smooth S. 192. *glabra*, L. (**) Th.
Very common in C. and nearly, or quite, as large as *R. typhina*. The trunk occasionally 5-6 in. in diameter. These two species are much alike, and, pubescence aside, one might easily be mistaken for the other. It is no stretch of imagination to believe such closely allied species, and there are many such, are descended from a common stock. Indeed, one can scarcely believe otherwise if he studies plants extensively.
- Dwarf S. 193. *copallina*, L. (**) C. & S.
Abundant in the pine country on light soil.
- Poison S. Poison Dogwood. 194. *venenata*, DC. (***)
Common in swamps and poisonous to the touch. A low shrub, with smooth, grayish bark, and dull, white fruit in clusters.
- Poison Ivy. Poison Oak. 195. *Toxicodendron*, L. (**) Th.
This is the dreaded "Poison Ivy." It is innocuous to some persons, and cows eat it with impunity. Frequent.
- Climbing P. Ivy. 196. *Toxicodendron*, L., var. *radican*, Torr. Th.
Tall-climbing, often to tops of forest trees; stems frequently several inches in diameter. More abundant than the sp.
- Fragrant Sumach. 197. *aromatica*, Aiton. (***) Th.
A low shrub, with bright red fruit; worthy of cultivation. Less frequent than other members of the genus. Found chiefly on bluffs and sandy hills through the middle counties of the L. P. "N. to Saskatchewan."—Torr. & Gr., Fl. N. Am.

VITACEÆ.

(Vine Family.)

VITIS

- Northern Fox-grape. 198. *Labrusca*, L. C. & S.
Dr. Clark and Dr. Cooley. Concord, Isabella, Catawba, etc., are seedlings of this species. Rare.
- Summer Grape. 199. *æstivalis*, Mx. C. & S.
Lyons (!); Stanton (!); Crystal Lk., Montcalm Co. (!); Flint; Ann Arbor.—Winch. Cat.; S. Mich.—Wright Cat., etc. Infrequent S.
- Frost Grape. 200. *riparia*, Mx. Th.
Common along our rivers; infrequent in the pine region, where *V. æstivalis* is very abundant. Flowers very fragrant, filling the air with odor. The small, glaucous fruit is sometimes eaten. *Vitis cordifolia* apparently does not occur.

AMPELOPSIS

- Virginia Creeper. Five-leaf Ivy. American Ivy. 201. *quinquefolia*, Mx. (***) Th.
A very desirable climber, often cultivated. Some specimens seem to cling to walls and buildings much better than others. Common.

RHAMNACEÆ.

(Buckthorn Family.)

RHAMNUS

- Buckthorn. 202. *alnifolia*, L' Her. Th.
Common.

CEANOTHUS

- New Jersey Tea. 203. *Americanus*, L. (***) Th.
Red-root. Sandy woods, rarely on beach and maple land. Frequent.
Ceanothus. 204. *ovatus*, Desf.
Dr. Pitcher; also, east shore L. Huron, E. Ont., and L. Sup.—Can. Cat.

CELASTRACEÆ

(Staff-tree Family.)

CELASTRUS

- Celastrus. 205. *scandens*, L. (***) C. & S.
Wax-work. An ornamental climbing shrub, the orange and scarlet-arrilled fruit remaining over winter. Easy to grow and desirable for its autumn and
Climbing Bit-ter-sweet. winter effect. The staminate and pistillate flowers are on different individuals, and this must not be overlooked when specimens are taken from the field for cultivation.

EUONYMUS

- Waahoo. 206. *atropurpureus*, Jacq. C. & S.
Burning-Bush. Low river-banks. Well distributed, but nowhere very common. Worthy of cultivation. Bark of shrub and roots gathered for the drug trade—an ingredient of various tonic bitters and patent nostrums.
- Trailing Strawberry Bush. 207. *Americanus*, L., var. *obovatus*, T. & Gr. C. & S.
Common.

SAPINDACEÆ.

(Soapberry Family.)

STAPHYLEA

- Bladder-Nut. 208. *trifolia*, L. Th.
Marquette Co.—Burt; and frequent along river banks in L. P. A curious and interesting low shrub, with drooping white flowers, ovate, pointed, serrate leaflets, and large triangular pods, whence the common name. Sometimes cultivated and deserving attention.

ÆSCULUS

- Ohio Buckeye. 209. *glabra*, Willd. S.
Fetid B. River-bottoms, Lenawee Co.—Prof. Beal; and probably in other localities in the southern tier of counties.

ACER

- Striped Maple. 210. *Pennsylvanicum*, L. (***) N. & U. P.
Abundant in U. P.—Whitney, common at Petoskey (!), and occasional as far S. on the Huron shore as Alcona Co.—Winchell Cat., and in the interior as Houghton Lake (!).
- Mountain Maple. 211. *spicatum*, Lam. C. N. & U. P.
Common in U. P.; Alcona Co.—Winch. Cat.; Crystal Lake, Montcalm Co. (!); and occasional in cold swamps as far south as banks of Grand river near Lansing—Beal.
- Sugar Maple. 212. *saccharinum*, Wang. (***) Th.
Rock M. This and the next yield "maple sugar." Frequent in the U. P., and abundant in the lower, forming extensive groves, either alone or in connection with beech. Largely used for fuel, and to some extent for cabinet purposes, especially the curled and bird's eye varieties. Extensively planted as a shade-tree. In localities badly infested with borers of the genus *Clytus*.

- Black Sugar M. 213. *saccharinum*, Wang., var. *nigrum*, T. & Gr. Th.
 Along with the preceding, and much resembling it. Distinguished best by its prominent stipules and downy leaves. Common.
- Silver Maple. White M. 214. *dasycarpum*, Ehrh. C. & S.
 Low ground along rivers. This and the next are fine shade and ornamental trees. Often planted. Common.
- Red Maple. Swamp M. 215. *rubrum*, L. Th.
 On low ground and along streams. Very common.

NEGUNDO

- Negundo. Box-elder. Ash-leaved Maple. 216. *aceroides*, Mœnch. C. & S.
 River banks. A small, handsome tree, with green twigs, ash-like leaves, and pendant flowers and keys. Sometimes planted, and would be more often if its value was known. Frequent.

POLYGALACEÆ.

(Milkwort Family.)

POLYGALA

- Purple Polygala. 217. *sanguinea*, L. (***) C. & S.
 Belding(!); Ionia(!); Flint; Macomb Co., etc. Local, but usually abundant when found at all.
- Polygala. 218. *cruciata*, L. S.
 S. Mich.—Wright Cat. Rare.
- Polygala. 219. *verticillata*, L. C. & S.
 Flint; Lansing(!); Macomb Co.; Wayne Co.(!), etc. Common in some places, rare in others. The fresh roots have the smell of wintergreen, or *Spireu lobata*.
- Seneca Snake-root. 220. *Senega*, L. (*) Th.
 Common.
- Broad-leaved S. S. 221. *Senega*, L., var. *latifolia*, T. & Gr. Rare.
 Hubbardston (!); Flint, etc.
- Pink Polygala. 222. *polygama*, Walt. (***) C. & S.
 Sandy soil. Ionia (!), Clinton (!), Montcalm (!), and counties southward. Infrequent.
- Flowering Wintergreen. Fringed Polygala. 223. *paucifolia*, Willd. (***)
 Common on pine land; the large, rose-purple flowers very beautiful. *Comptonia*, *Rhus aromatica*, *Moneses*, and this are often found together. Dr. Wright found a variety with white flowers.

LEGUMINOSÆ.

(Pulse Family.)

LUPINUS

- Wild Lupine. 224. *perennis*, L. C. & S.
 Abundant in light sand. Flowers, a fine blue-purple, in May and June forming great masses of color. Worth cultivating.

TRIFOLIUM.

- Red Clover. 225. *pratense*, L. (***) Th.
 Meadows and fields. Very extensively cultivated for hay and pasture, and as a fertilizer of the soil, in which capacity it has no equal.
- White Clover. 226. *repens*, L. Th.
 Meadows, pastures, and road-sides. Very com.
- Yellow Clover. Low Hop-C. 227. *procumbens*, L. C. & S.
 Ionia (!); Lansing (!), etc. Blossoms bright yellow and very pretty. Infr.

MELILOTUS

- Yellow Melilot. 228. *officinalis*, Willd. (***) C. & S.
 Rare.

- Sweet Clover. 229. *alba*, Lam. (***) L. P.
 White Melilot. More common than the preceding, but only occasional. A valuable honey plant.

MEDICAGO

- Lucerne. 230. *sativa*, L. C. & S.
 Escaped from cultivation in a few places.
 Black Medick. 231. *lupulina*, L. L. P.
 Nonesuch. Waste places. Mackinac; Jackson (!); Ann Arbor, etc.; forming patches.

PETALOSTEMON

- Prairie Clover. 232. *violaceus*, Mx. S. W.
 "Dry prairies, Mich."—Gray. Rare.
 Prairie Clover. 233. *candidus*, Mx. S. W.
 With the preceding.—Gray. These two and the next are "prairie plants."

AMORPHA

- Lead-plant. 234. *canescens*, Nutt. S.
 W. Mich.—Winch. Cat.; Ann Arbor.—Prof. M. W. Harrington. Rare.

TEPHROSIA

- Hoary Pea. 235. *Virginiana*, Pers. (***) C. & S.
 Goat's Rue. Clinton Co. (!); Montcalm Co. (!); Macomb Co.; Livingston Co.—Miss Clark, etc. On light sand. Infrequent.

ASTRAGALUS

- Cooper's Vetch. 236. *Cooperi*, Gr. C. & S.
 Dr. A. B. Lyons; Cooley MS. Rare.
 Milk V. 237. *Canadensis*, L. Th.
 Put-in Bay (!); Ann Arbor (!); Macomb Co.; Orchard Lk. (!); Montcalm Co. (!); and northward. Well distributed but Infrequent.

DESMODIUM

- Tick-Trefoil. 238. *nudiflorum*, DC. C. & S.
 Crystal Lk., Montcalm Co. (!); Flint; Lansing; Macomb Co.; S. Mich.—Wright Cat., etc. Common.
 Tick-Trefoil. 239. *acuminatum*, DC. C. & S.
 Woodlands. Very common.
 Tick-Trefoil. 240. *pauciflorum*, DC. S.
 Mont Lk.—Miss Clark in Winch. Cat. Rare.
 Round-leaved T.-T. 241. *rotundifolium*, DC. C. & S.
 Trailing T.-T. Hubbardston (!); Ionia (!); Flint; Lansing (!); So. Haven; Macomb Co.; Ann Arbor.—Allmend. Cat., etc. Infrequent.
 Tick-Trefoil. 242. *canescens*, DC. S.
 Ann Arbor—Allmend. Cat.; S. West—Wright Cat. Rare.
 Tick-Trefoil. 243. *cuspidatum*, Hook. C. & S.
 Hubbardston (!); Flint; Lansing; Ann Arbor; Macomb Co.; S. Mich.—Wright, etc. Usually on oak land. Frequent.
 Tick-Trefoil. 244. *viridiflorum*, Beck. C. & S.
 Hubbardston (!); Macomb Co. Not common.
 Tick-Trefoil. 245. *Dillenii*, Darlingt. C. & S.
 Oak woods. Hubbardston (!); Flint; Macomb Co.; S. Mich.—Wright Cat.; Mont Lk.—Miss Clark, etc. Frequent.
 Tick-Trefoil. 246. *paniculatum*, DC. C. & S.
 Oak woods. Hubbardston (!); Flint; Macomb Co.; Lansing; S. Haven; S. Mich.—Wright Cat., etc. Frequent.
 Tick-Trefoil. 247. *Canadense*, DC. C. & S.
 Hubbardston (!) and probably farther N.; Flint; Lansing; Ann Arbor—Allmend. Cat. and Winch. Cat., etc. Flowers early. Frequent.

LIBRARY

N. C. State College

- Tick-Trefoil. 248. *sessilifolium*, T. & Gr. S.
"Michigan"—Gray; S. Mich.—Winch. Cat. Rare.
- Tick-Trefoil. 249. *rigidum*, DC. C. & S.
Hubbardston (!); Flint; Macomb Co.; Ann Arbor, and S. W.—Winch. Cat. Infrequent.
- Tick-Trefoil. 250. *ciliare*, DC. S.
Dr. Wright. Rare.
- Tick-Trefoil. 251. *Marylandicum*, Boott. C. & S.
Dry hills, Ionia(!), and southward. Infrequent.

LESPEDeza

- Creeping Lespedeza. 252. *repens*, Barton. (?) S.
Winchell Cat.
- Bush Clover. 253. *violacea*, Pers. S.
Ann Arbor—Miss Clark; S. W.—Wright. Infrequent.
- Bush Clover. 254. *reticulata*, Pers. C. & S.
Dry woods and fields. Common.
- Bush Clover. 255. *reticulata*, Pers., var. *angustifolia*, Maxim. S. W.
Wright Cat. Rare.
- Bush Clover. 256. *Stuvei*, Nutt. S.
Winchell Cat.; Gray in Manual. Rare.
- Bush Clover. 257. *hirta*, Elliott. C. & S.
Common.
- Bush Clover. 258. *capitata*, Mx. C. & S.
Abundant in old fields; prefers light sand.
- Bush Clover. 259. *angustifolia*, Ell. C. & S.
In the same situations, and along with the preceding two. Frequent.

VICIA

- Common Vetch. Tare. 260. *sativa*, L. S.
Detroit—Dr. Lyons; Springwells, near Detroit—Henry Gillman. Infrequent.
- Blue Vetch. 261. *Cracca*, L. S.
S. Mich.—Wright Cat.; Ann Arbor—Prof. M. W. Harrington. Rare or local.
- Pale Vetch. Carolina V. 262. *Caroliniana*, Walter. C. & S.
Dry soil. Very common.
- Purple V. American V. 263. *Americana*, Muhl. Th.
Ann Arbor; Ionia(!); Montcalm Co.(!), etc.; N. to Lake Sup. Much rarer than the preceding, and very pretty. Spreads rapidly in C., along railroads and highways, and acts like an immigrant.

LATHYRUS

- Beach Pea. 264. *maritimus*, Bigel. Th.
All around the Gr. Lakes, but seldom or never seen in the interior. Com.
- Vetchling. Everlasting Pea. 265. *venosus*, Muhl. C. & S.
Ionia Co.(!); Clinton Co.(!); Flint; Macomb Co.; Ann Arbor, etc. Beautiful, and worthy a place in the garden, by reason of its large, purple flowers. Infr.
- Pale Vetchling. Indian Pea. 266. *ochroleucus*, Hooker. Th.
Hillsides and dry uplands. Infr.
- Marsh Vetchling. 267. *paluster*, L. Th.
Ann Arbor; Ionia(!); Bay City; Antrim Co.; Petoskey to L. Sup. This and the next are both common in C., growing in marshes along with *Apios tuberosa*, *Campanula aparinoides*, etc.
- Marsh Vetchling. 268. *paluster*, J. var. *myrtifolius*, Gr. Th.
Com.

APIOS

- Ground-nut. 269. *tuberosa*, Mœnch. C. & S.
 Wild Bean. A curious vine, with edible tubers, and fragrant, chocolate-brown flow-
 Dakota Potato. ers. Common.

PHASEOLUS

- Wild Bean. 270. *diversifolius*, Pers. S.
 S. E. along shore, and on the islands of Lake Erie (!), and shore of Lake Michigan at So. Haven—Bailey. Probably not much farther north, and not found in the interior.

AMPHICARPEA

- Hog Pea-nut. 271. *monoica*, Elliott. Th.
 Fields and woods. Variable. Common.

BAPTISIA

- False Indigo. 272. *tinctoria*, R. Br. (***) C. & S.
 Wild Indigo. Woodard Lake, Ionia Co. (!); Flint; Macomb Co.; Ann Arbor—Winch. Cat.; etc. Abundant in places, but not well distributed; much commoner than the next two species.
 Wild Indigo. 273. *Leucantha*, Torr. & Gr. S.
 Calhoun Co.—Winch. Cat.; Ann Arbor—Allmendinger Cat.; etc. Rare.
 Wild Indigo. 274. *leucophæa*, Nutt. S.
 Mich.—Gray. Rare.

CERCIS

- Red-bud. 275. *Canadensis*, L. C. & S.
 Judas-tree. Indigenous through the southern part of the State, and as far N. in the west as Grand river valley. Plaster creek, Grand Rapids—Garfield; Ionia—Le Valley(?); banks of Thornapple river, Eaton county; Ann Arbor; Adrian; South Haven, etc. This tree is quite frequent in the valley of the river Raisin, 10 miles S. W. of Adrian, in company with *Negundo*, *Gymnocladus*, and *Æsculus glabra*. The largest trees are ten inches in diameter—Henry Owen. Frequently cultivated.

CASSIA

- Wild Senna. 276. *Marylandica*, L. (*) C. & S.
 Lyons(!); Grand Haven(!); Ann Arbor, etc. River banks; a tall weed with bright yellow blossoms. Infrequent.

GYMNOCLADUS

- Kentucky Coffee-tree. 277. *Canadensis*, Lam. C. & S.
 A slender tree along river banks, as far N. as Maple river, in Clinton Co. (!); also Fisk creek, Montcalm Co. (!); banks of Grand river (!); etc. The largest specimen seen was about 60 feet high, and less than a foot in diameter. The wood is reddish, fine-grained, tough, and takes a good polish. Sometimes planted, and a valuable ornamental tree, with clubby branches, large and graceful bi-pinnate leaves, and large, flat pods in autumn. Farther south, a large tree. Infrequent.

GLEDITSCHIA

- Honey Locust. 278. *triacanthos*, L. S.
 Three-thorned Acacia. Grows along the river Raisin, and is certainly indigenous. Often two feet in diameter.—Prof. Beal, Henry Owen, *et al.* Probably along the St. Joseph, also, and in other localities in the extreme S. Frequently planted for hedges.

ROSACEÆ.

(Rose Family.)

PRUNUS

- Wild Plum. 279. *Americana*, Marshall. C. & S.
 Along our rivers; the fruit either round or oblong, yellow, red, or green, and pleasant or bitter. Occasionally a tree bears large fruit which is quite palatable. Frequently the plums blast and the trees bear instead hollow, green bodies somewhat resembling plums. Common.

- Dwarf Cherry.
Sand Cherry. 280. *pumila*, L. Th.
L. Sup.; Emmet Co.(!); Houghton Lake(!); Mecosta Co.(!); South Haven;
Saginaw Bay—Winchell, etc. Frequent in the N. half of the L. P., but
not yet found in the interior S. of Saranac, Ionia Co.(!), where it occurs
in a dry glade along with *Synthyris*, *Castilleja*, *Lupinus*, and *Senecio*
aureus.
- Wild Red
Cherry.
Pin Cherry. 281. *Pennsylvanica*, L. Th.
Very abundant on sandy land in the N. half of the State, but less common
southward, where *P. serotina* takes its place. Occasionally it becomes
a good sized tree, —40-50 feet high, a foot and a half in diameter. One
such stands by the road-side near Prairie Cr., in Ronald Tp., Ionia Co.
- Choke Cherry. 282. *Virginica*, L. Th.
A shrub or small tree. Very pretty in May by reason of its light green
leaves and racemes of white flowers. Sometimes cultivated for orna-
ment. Common.
- Wild Black
Cherry. 283. *serotina* Ehrh. (*) Th.
A medium sized timber tree, well known as "Black Cherry." Frequent
in C. and S., in places sufficiently so for economic use. Rare in N. and
U. P. The bark is often used as a tonic.

NEILLIA

- Nine-Bark. 284. *opulifolia*, Benth. and Hook. Th.
Along streams. A low shrub with re-curved branches, white flowers,
clusters of reddish pods, and something the habit of red currant but
larger. Occasionally cultivated and a good addition to the lawn.

SPIREA

- Meadow-
Sweet.
Willow-
leaved Spirea. 285. *salicifolia*, L. Th.
In marshes. Common.
- Hardhack.
Steeple-Bush. 286. *tomentosa*, L. (**) C. & S.
Ionia Co.(!) and southward. A low shrub with fine rose-colored flowers,
in dense panicles, and leaves rusty-wooly beneath. A striking plant
and worth trying in the garden. Infr.
- Queen of the
Prairie. 287. *lobata*, Jacquin. S.
"Meadows and prairies, Penn. to Mich."—Gray. Occurs, if at all, only in
the S. Often cultivated.

GILLENIA

- Gillenia.
Bowman's
Root.
Indian Physic. 288. *trifoliata*, Moench. (**) S.
Winchell Cat. Rare.

POTERIUM

- Canadian Bur-
net. 289. *Canadense*, Benth. & Hook. S.
South Haven—Bailey; Ann Arbor—Allmendinger. Rare.

AGRIMONIA

- Agrimony. 290. *Eupatoria*, L. (***) Th.
Dry soil. Common.
- Small-flower
ed A. 291. *parviflora*, Ait. (***) S. E.
Detroit—Miss Clark; Macomb Co. Infrequent.

GEUM

- White Geum.
Avens. 292. *album*, Gmelin. Common.
- Virginia G. 293. *Virginianum*, L. C. & S.
Common.
- Large-leaved
G. 294. *macrophyllum*, Willd. U. P.
Rare, or not at all in L. P.
- Strict G. 295. *strictum*, Aiton. Th.
New Haven, Gratiot Co.(!); Petoskey(!), etc. Rare S.
- Purple Avens.
Water A. 296. *rivale*, L. (**) Th.
Swamps and wet places. Common.

Three-flow-
ered Geum.

297. *triflorum*, Pursh.

Otisco Tp., Ionia Co. (!)—A. B. Morse; Montcalm Co., near Greenville (!); the only reported localities in the State. Attractive by reason of its long, plumose styles, and dissected, fern-like leaves. Rare.

WALDSTEINIA

Barren Straw-
berry.

298. *fragarioides*, Tratt.

Th.

Livingston Co.—Winch. Cat.; Ionia (!); Flint, etc.; to L. Sup.—Whitney Cat. Rather local, but abundant when found at all.

POTENTILLA

Cinquefoil.

299. *Norvegica*, L.

Th.

Common.

Common C.
Five-Finger.

300. *Canadensis*, L.

Th.

Macomb Co., and Flint to L. Sup. Rare in C. & S.

Five-Finger.

301. *Canadensis*, L., var. *simplex*, T. & Gr.

Range unknown; the common form in C. & S., where it is abundant.

Arctic Poten-
tilla.

302. *frigida*, Villars.

U. P.

Dr. Lyons.

Rare.

Silvery
Cinque foil.

303. *argentea*, L.

S.

Ann Arbor—Clark and Allmendinger. Not reported by any other observers.

Stout Poten-
tilla.

304. *arguta*, Ph.

Th.

Flowers either white or yellow, generally all in one locality of one color; the same is true of *molle mullein*; Ann Arbor; Macomb Co.; Lansing (!); Ionia (!); and N. to Isle Royal. Frequent on light sand; in places, common.

Silver-weed.

305. *Anserina*, L.

Th.

Frequent along the Great Lakes, but rare in the interior.

Shrubby
Cinque-foil.

306. *fruticosa*, L.

Th.

Edges of swamps. A low shrub with small, silky leaves, and a profusion of showy yellow blossoms, in August. Ranges N. to Arctic America. Common.

Three-toothed
C.

307. *tridentata*, Solander.

N. & U. P.

Barrens of Missaukee Co. (!); "shores of the Upper Great Lakes"—Gray; Isle Royal—Dr. Lyons. Infrequent.

Marsh Five-
Finger.

308. *palustris*, Scop.

Swamps throughout, but nowhere abundant.

FRAGARIA

Wild Straw-
berry.

309. *Virginiana*, Duchesne. (***)

Th.

Very common.

Wild Straw-
berry.

310. *Virginiana*, Duch., var. *Illinoensis*, Gr.

U. P.—Henry Gillman, in Am. Nat., Sept. '69; and probably in Lower P., also.

Wild Straw-
berry.

311. *vesca*, L.

Th.

Occasional in S., frequent in C., and abundant northward, where it seems to take the place of *F. Virginiana*. Moist woodlands and borders of swamps.

RUBUS

Dalibarda.

312. *Dalibarda*, L.

S.

Ann Arbor—Mary Clark; Macomb Co.—Cooley. May occur farther north, and perhaps throughout. Rare.

Purple Flow-
ering Rasp-
berry.

313. *odoratus*, L.

Th.

From Ft. Gratiot (Winchell) northward. Not observed in the interior through C. & S. Common in N. & U. P.

White Flow-
ering R.

314. *Nutkanus*, Mocino.

N. & U. P.

Frequent at Petoskey (!) and common farther north.

Dwarf R.

315. *triflorus*, Richard.

Th.

Frequent.

- Wild Red R. 316. *strigosus*, Mx. Th.
Variable. Many seedlings in cult. Common.
- Black R. 317. *occidentalis*, L. Th.
Thimbleberry Our garden Black-caps are seedlings of this. Hybrids between this and the preceding frequently occur. Common.
- Blackberry. 318. *villosus*, Aiton. (*) Th.
Very common in C., covering thousands of acres of waste pine-land to the exclusion of almost everything else. Rare in U. P. The fruit is agreeable and much gathered. Occasionally a plant is found bearing large berries of superior quality. This sp. is the original of the Lawton, Wilson, Kittattiny, and other cultivated sorts.
- Dewberry. 319. *Canadensis*, L. (*) C. & S.
Low Black-berry. Extensively trailing—12 ft. or more—deep-rooted, hard to exterminate, and troublesome in sandy fields. Fruit ripe about the middle of July, sweeter than that of *R. villosus*. Frequent.
- Running 320. *hispidus*, L.
Swamp B. Very abundant through the C. in the pine country, frequently covering the ground; also, S. and probably Th.

ROSA

- Prairie Rose. 321. *setigera*, Mx. C. & S.
Climbing Rose. So. Haven—Bailey; Jackson Co.—Winchell; Flint—Dr. Clark; Macomb Co.—Cooley; Grosse Isle—Miss Clark. Possibly indigenous, but very rare or local. Cultivated.
- Swamp R. 322. *Carolina*, L. Th.
Swamps. Common.
- Dwarf Wild 323. *parviflora*, Ehrh. C. & S.
Rose. Abundant and pretty. In the C. it is our common wild-rose. Dry soil. A low form on hills about Ionia has narrow leaves, with peduncles and ripe fruit glandular-bristly.
- Early Wild 324. *blanda*, Aiton. Th.
Rose. Ionia (!); Hubbardston (!); Flint; Ft. Gratiot—Winch. Cat., etc. Common northward, but infrequent south of lat. 43°.
- Sweet Briar. 325. *rubiginosa*, L. C. & S.
Roadsides. Frequent.

CRATÆGUS

- Scarlet-fruit- 326. *coccinea*, L. Th.
ed Thorn. Common.
- Downy Thorn. 327. *subvillosa*, Schrader. C. & S.
Frequent in C.; our largest thorn, frequently 20-25 ft. and a foot in diameter.
- Black Thorn. 328. *tomentosa*, L. C. & S.
Pear T. The form doubtfully referred to this species is a shrub with large, thick, oval, sharply-serrate leaves, beneath prominently veined, and tapering into a marginal petiole; corymbs *very straggling* and *fruit quite small*— $\frac{1}{4}$ in. Infrequent.
- Pear T. 329. *tomentosa*, L., var. *pyrifolia*, Gr. Th.
Common.
- Pear T. 330. *tomentosa*, L., var. *punctata*, Gr. C. & S.
A shrub or low tree. Very common in C. Other forms of *Cratægus* occur, and the whole genus evidently needs revision.
- Cockspur 331. *Crus-galli*, Linn. C. & S.
Thorn. Usually a shrub. Used for hedges in the East. Common.

PIRUS

- American 332. *coronaria*, L. C. & S.
Crab-apple. Thickets and along streams; the fine rose colored flowers delightfully fragrant in May. The fruit green and bitter. Common.
- Choke-berry. 333. *arbutifolia*, L. Th.
Hubbardston (!), etc. Rare in C.

- Choke-berry. 334. *arbutifolia*, L., var. *melanocarpa*, Hook. Th.
Burt. MS.; Isle Royale—Whitney's Cat., etc. Frequent in swamps through C.
- American Mountain Ash. 335. *Americana*, DC. (***). N. & U. P.
Ludington, and north along the Michigan shore to Charlevoix; Sault Ste. Marie; and into Canada where it is common; also westward through U. P.—Burt, and Whitney.

AMELANCHIER

- June-berry. 336. *Canadensis*, Torr. & Gr. Th.
Shad-bush. A shrub or small tree. Fruit variable in size and flavor, frequently
Service-berry. delicious, and so well known to the birds that one can seldom find it well ripened. Undoubtedly horticulturists could develop this into a profitable fruit, but having already so many choice kinds, it is questionable if there would be any immediate profit. It is well, however, to remember that all our choice fruits have come from very ordinary wild sorts. Common.
- Service-berry. 337. *Canadensis*, Torr. & Gr., var. (?) *oblongifolia*, T. & Gr. Th.
Ionia (!); Flint; S. Mich.—Winchell Cat. A low shrub on sandy land. Infrequent.
- Service-berry. 338. *Canadensis*, Torr. & Gr., var. *rotundifolia*, T. & Gr. C. & S.
Along streams, nearly as large as the sp.; leaves oval, serrate, prominently veined beneath. Flint; Hubbardston (!), etc. Not common.
- Service-berry. 339. *alnifolia*, Nutt. L. P.
Presque Isle—Winchell; Flint—Dr. Clark. Rare.

SAXIFRAGACEÆ.

(Saxifrage Family.)

RIBES

- Wild Goose-berry. 340. *Cynosbati*, L. Th.
The large berries prickly, but edible. Common.
- Wild Goose-berry. 341. *oxyacanthoides*, L. C. & S.
Low grounds along Fish Creek, and Maple River (!); Flint; Macomb Co., etc. Fruit smooth. Common.
- Wild Goose-berry. 342. *rotundifolium*, Mx. Th.
St. Joseph's Is., and Sitting Rabbit—Winch. Cat. Rare in C. & S.
- Swamp Goose-berry. 343. *lacustre*, Poir. N. & U. P.
As far south as Houghton Lake (!).
- Fetid Currant. 344. *prostratum*, L' Her. C. N. & U. P.
Flint; Isabella Co. (!); Missaukee Co. (!); St. Joseph's Is.—Winch. Cat., etc.
- Wild Black Currant. 345. *floridum*, L. Th.
Common.
- Red Currant. 346. *rubrum*, L. Th.
Deep swamps and cold woods, under tamaracks. Ann Arbor; Ionia (!); Stanton (!), and northward. Infrequent.

PARNASSIA

- Grass of Parnassus. 347. *parviflora*, DC. U. P.
L. Sup.—Can. Cat.; Grand Island—Henry Gillman; also, northwest shore of Lake Michigan, in Wisconsin—Gillman.
- Grass of Parnassus. 348. *palustris*, L. U. P.
Drummond's Is.—Winch Cat.; "Shore of L. Sup., and northward"—Gray, from Dr. Pitcher.
- Grass of Parnassus. 349. *Caroliniana*, Mx.
Swamps and wet banks. Rare northward; common in C. & S.

SAXIFRAGA

- Yellow Mountain Saxifrage. 350. *aizoides*, L. U. P.
"Northern Michigan."—Gray.

- Three-tooth'd Saxifrage. 351. *tricuspidata*, Retz. U. P.
 "Shore of L. Sup. and northward"—Gray; Isle Royale—Dr. Lyons and Whitney Cat.
- Saxifrage. 352. *Aizoon*, Jacq. U. P.
 "Upper Mich."—Gray; Isle Royale—Lyons, and Whitney.
- Early S. 353. *Virginensis*, Mx. U. P.
 L. Sup.—Can. Cat., etc.
- Swamp S. 354. *Pennsylvanica*, L. Th.
 Bogs. Common.

HEUCHERA

- Alum-root. 355. *Americana*, L. (**) C. & S.
 Grand Rapids—Coleman; Ann Arbor—Winch. Cat. Rare.
- Alum-root. 356. *hispida*, Ph. C. & S.
 Common in Grand-Saginaw Valley.

MITELLA

- Two-leaved Mitrewort. 357. *diphylla*, L. Th.
 Bishop's Cap. Hillside in rich woods. Seeds black. Very common.
- Naked M. 358. *nuda*, L. Th.
 Shaded swamps in *Sphagnum*. Racemes sometimes inclined to be paniculate; seeds brown. A very delicate and pretty little herb, usually growing under tamaracks and along with *Ribes rubrum*, *Chiogenes hispidula*, *Smitacina trifolia*, and *Salix candida*. The scape frequently bears a small leaf, as if to suggest the derivation of this and the preceding from one earlier form. Frequent.

TIARELLA

- False Mitrewort. 359. *cordifolia*, L. Th.
 Ft. Gratiot; Macomb Co.; Flint; Stanton (!); and northward. Common in N. & U. P.; rare in C. & S. W.

CHRYSOSPLENIUM

- Golden Saxifrage. 360. *Americanum*, Schw. Infr.
 So. Haven; Hubbardston (!); Flint; and north.

CRASSULACEÆ.

(Orpine Family.)

PENTHORUM

- Ditch Stonecrop. 361. *sedoides*, L. (***) C. & S.
 Roadsides and ditches, everywhere.

SEDUM

- Live-for-ever. 362. *Telephium*, L. (***) C. & S.
 Garden Orpine. Escaped from cultivation, as have *S. acre* and some others.

HAMAMELACEÆ.

(Witch-Hazel Family.)

HAMAMELIS

- Witch-Hazel. 363. *Virginiana*, L. (***) Th.
 The yellow blossoms open in November after the leaves have fallen. The ripe pods burst with a sharp report, scattering the seeds,—this is frequently the case with pods of other plants. Common.

HALORAGÆÆ.

(*Water-Milfoil Family.*)

MYRIOPHYLLUM

- Water-Milfoil. 364. *spicatum*, L. Th.
 L. Sup.—Can. Cat.; etc.
- Water-Milfoil. 365. *verticillatum*, L. Th.
 Hubbardston (!); Flint; Macomb Co.; S. Mich.—Wright Cat.
- Water-Milfoil. 366. *heterophyllum*, Mx. C. & S.
 Fruitport—E. J. Hill; Huron R. at Ypsilanti—Lyons; Macomb Co.—Cooley.
- Water-Milfoil. 367. *tenellum*, Bigel. (?)

PROSERPINACA

- Mermaid-weed. 368. *palustris*, L. Freq.
 In swamps along with *Alopecurus aristulatus*, and *Ludwigia palustris*.

HIPPURIS.

- Mare's-Tail. 369. *vulgaris*, L. Th.
 L. Sup.—Can. Cat.; S. Mich.—Wright Cat. Rare.

ONAGRACEÆ.

(*Evening-Primrose Family.*)

CIRCÆA

- Enchanter's Night-shade. 370. *Lutetiana*, L. Th.
 Woods. Very common.
- Enchanter's Nightshade. 371. *alpina*, L. Th.
 Woods. Common.

GAURA

- Gaura. 372. *biennis*, L. S.
 Dr. Wright.

EPILOBIUM

- Great Willow-herb. 373. *spicatum*, Lam. (***) Th.
 Fire-weed. Springs up abundantly where forests have been burned over, hence one common name.
374. *organifolium*, Lam. U. P.
 "Upper Wisconsin and Michigan"—Gray.
- Linear-leaved Epilobium. 375. *palustre*, L., var. *lineare*, Gr. Infrequent in
 Hubbardston (!); Flint; Stanton (!); and north to L. Sup. C. and rare or not at all in S.
- Downy Willow-herb. 376. *molle*, Torr. C. & S.
 Hubbardston (!); Flint; Lansing (!); Ann Arbor; Macomb Co., etc. Prob-
 ably Th. Frequent.
377. *coloratum*, Muhl. Th.
 Common.

GENOTHERA

- Evening Prim-rose. 378. *biennis*, L. (***) Th.
 Common.
- Evening Prim-rose. 379. *biennis*, L., var. *muricata*, Lindl. Th.
 L. Sup.—Can. Cat.; Petoskey (!); Ionia (!), etc.
- Evening Prim-rose. 380. *biennis*, L. var. *grandiflora*, Lindl.
 L. Sup.—Can. Cat.

- Sundrops. 381. *fruticosa*, L. C. & S.
Palo, Ionia Co. (!); Flint; Macomb Co.; Ann Arbor—Allmend. Cat.
Infrequent.
- Small *Oenothera*. 382. *pumila*, L. (includes *O. chrysantha*, Mx.) Th.
Ontonagon Falls—Whitney Cat.; So. Mich.—Wr. Cat. Infrequent.
- LUDWIGIA
- False Loose- 383. *alternifolia*, L. S. W.
strife. Dr. Wright.
Seed-box.
- False L. 384. *sphaerocarpa*, Ell. (?)
Near Detroit—Dr. Cooley.
- False L. 385. *polycarpa*, Short & Peter. C. & S.
Dr. Pitcher and Dr. Clark. Rare.
- Water Purs- 386. *palustris*, Ell. L. P.
lane. Common.

LYTHRACEÆ.

(Loosestrife Family.)

- AMMANNIA
- Ammannia. 387. *humilis*, Mx. S.
"Michigan, Ill., and southward"—Gray. Rare.
- LYTHRUM.
- Loosestrife¹ 388. *alatum*, Ph. S.
Near Detroit—Cooley MS.; S. Mich.—Wright Cat.; Kalamazoo—Tuthill.
- NESÆA
- Swamp L. 389. *verticillata*, HBK. C. & S.
Crystal Lake, Montcalm Co. (!); Flint; Birmingham, Oakland Co. (!); So.
Haven, etc. Infrequent.

CACTACEÆ.

(Cactus Family.)

- OPUNTIA
- Prickly Pear. 390. *Rafinesquii*, Engelm.
Indian Fig. Common in Newaygo Co. along the Muskegon R. (!) ("a quite spiny
form" Engelm.), and a stunted variety on sand barrens near Green-
ville (!)—Mr. Satterlee; also, northward into British Am.—Engelmann.
O. vulgaris does not occur.

CUCURBITACEÆ.

(Gourd Family.)

- SICYOS
- One-seeded 391. *angulatus*, L. S.
Star Cucum- Put-in Bay, Lk. Erie (!), and undoubtedly within our limits. Rare.
ber.
- ECHINOCYSTIS
- Wild Balsam 392. *lobata*, Torr. & Gr. C. & S.
apple. Common in low woods along streams. Ionia (!); Lansing (!); So. Haven;
Macomb County; Ann Arbor—Allmend. Cat., etc. Cultivated in the
east for arbors, window-screens, etc., but rarely here.

FICOIDEÆ.

(Fig Family.)

MOLLUGO

- Carpet-weed. 393. *verticillata*, L. C. & S.
Roadsides and sandy fields. Common.

UMBELLIFERÆ.

(Parsley Family.)

HYDROCOTYLE

- Water Penny-wort. 394. *Americana*, L. L. P.
Common in C.

- Water Penny-wort. 395. *umbellata*, L.
Pine Lake, Lansing (!); Woodard Lake, Ionia Co. (!); S. Mich.—Wright Cat., etc. Much rarer than the preceding. Either grows on sandy shores or is wholly aquatic, with floating leaves.

SANICULA

- Black Snake-root. 396. *Canadensis*, L. (***) C. & S.
Sanicle. Hubbardston (!); Flint; Ann Arbor—All. Cat., etc. Beech and maple woods. Infrequent.
- Sanicle. 397. *Marylandica*, L. (***) Th.
Oak woods. Common.

ERYNGIUM

- Rattlesnake Master. 398. *yuccæfolium*, Mx. (**) S. W.
Button Snake-root. Dr. Wright. Rare.
Eringo.

POLYTÆNIA

- Polytænia. 399. *Nuttallii*, DC. S.
Dr. Wright, also Gray. Rare.

HERACLEUM

- Cow-parsnip. 400. *lanatum*, Mx. (***) Th.
Low ground; tall and coarse. Common.

PASTINACA

- Parsnip. 401. *sativa*, L. Infrequent.
Fields, etc.

ARCHEMORA

- Cowbane. 402. *rigida*, DC. C. & S.
Hubbardston (!); Ann Arbor.—All. Cat., etc. Not much N. of lat. 43°. Infr.
403. *rigida*, DC., var. *ambigua*, T. & Gr. S.
Dr. Wright.

ARCHANGELICA

- Hairy Archangelica. 404. *hirsuta*, Torr. & Gr. (***) L. P.
Emmet Co.—Winch. Cat.; Lansing (!); Pontiac (!); Detroit, etc. Dry banks and open woods. Infr.
- Great Angelica. 405. *atropurpurea*, Hoffman. (***) Th.
Occasional in S., common in C. & N.; also, L. Sup.—Can. Cat.

SELINUM

- Hemlock-Parsley. 406. *Canadense*, Mx. (***) Th.
Ann Arbor—All. Cat.; Macomb Co.; Flint; Hubbardston (!); and north. Infr.

THASPIUM

- Meadow-Pars-nip. 407. *aureum*, Nutt. Th.
Macomb Co.; Ann Arbor—Miss Allmendinger; Sag. Bay, and Drummond's Is.—Winch. Cat. Not observed in Grand R. Valley, nor S. W. Freq.
- Meadow-Pars-nip. 408. *aureum*, Nutt., var. *apterum*, Gr. C. & S.
Low ground; very common in C.
- Meadow-Pars-nip. 409. *trifoliatum*, Gr. C. & S.
Flint; Put-in Bay (!); and S. W.—Dr. Wright. Rare.

PIMPENELLA

- Alexanders. 410. *integerrima*, Benth. & Hook. Th.
Dry soil. Very abundant in Grand-Saginaw Valley. Common.

CICUTA

- Spotted-Hem-lock. 411. *maculata*, L. (***) Th.
Beaver-Poison. Low meadows and swamps. Roots tuberous like the dahlia, and very poisonous. Com.
Musquash-root.
- Bulbous Cicuta. 412. *bulbifera*, L. Th.
Swamps. Common.

SIUM

- Water-Pars-nip. 413. *cicutæfolium*, Gmelin. (***) Th.
Clinton Co. (!); S. Mich.—Winch. Cat., etc. Frequent.

BERULA

- Water-Pars-nip. 414. *angustifolia*, Koch. (***) S.
Winchell, and Dr. Gray. Infrequent.

CRYPTOTÆNIA

- Honewort. 415. *Canadensis*, DC. C. & S.
Low woods. Common.

CHÆROPHYLLUM

- Chervil. 416. *procumbens*, Crantz. C. & S.
Low woods. Frequent in Grand River Valley (!); also Macomb Co.

OSMORRHIZA

- Sweet Cicely. 417. *longistylis*, DC. Th.
Cultivated in gardens for its aromatic root. Common.
- Hairy S. C. 418. *brevistylis*, DC. Th.
"The prevailing species."—Winchell. Probably true of counties along the Huron shore. Common.

CONIUM

- Poison Hem-lock. 419. *maculatum*, L. (*) Th.
Infrequent in C. & S. Common at Mackinac—Winch. Cat.

ERIGENIA

- Harbinger-of-Spring. 420. *bulbosa*, Nutt. C. & S.
Pepper-and-Salt. A delicate little plant in low woods, the flowers peeping from under matted leaves in earliest spring, often before the snow is gone. Common.

ARALIACEÆ.

(*Ginseng Family.*)

ARALIA

- Spikenard. 421. *racemosa*, L. (***) Th.
Spicy-aromatic; sometimes cultivated. Frequent.
- Bristly Sarsaparilla. 422. *hispida*, Ventenat. (***) C. N. & U. P.
Wild Elder. Apparently not south of the pine region. Common.

- Wild Sarsaparilla. 423. nudicaulis, L. (**) Th.
Very common.
- Ginseng. 424. quinquefolia, Decsne. and Planch. (**) Th.
Sault Ste. Marie; Ludington (!); Stanton (!), in great abundance; Hubbardston (!); Flint; Macomb Co.; Southwest—Wright Cat., etc. Usually rare, but so common in places that it has been dug for profit, and nearly exterminated. Root aromatic, medicinal.
- Ground-nut. Dwarf Ginseng. 425. trifolia, Decsne. & Planch. C. & S.
Very common in C.

CORNACEÆ.

(Dogwood Family.)

CORNUS

- Dwarf Cornel. Bunch-berry. 426. Canadensis, L. C. N. & U. P.
Rare, or not at all in S. Very Common.
- Flowering Dogwood. 427. florida, L. (*) C. & S.
Frequent as far north as Grand-Saginaw Valley, usually as a low tree in oak woods. Montcalm Co. is its northern limit (?). Not given in Wisconsin State Cat. Worthy of cultivation for its showy white blossoms, red fruit, and autumn foliage. Frequently blooms when only a bush, 3-4 ft.
- Round-leaved Dogwood. 428. circinata, L'Her. (**) Th.
Frequent.
- Silky Cornel. Kinnikinnick. Swamp Dogwood. 429. sericea, L. (**) C. & S.
Perhaps further north. Indians use the inner bark for smoking.
- Red-osier Dogwood. 430. stolonifera, Mx. Th.
Marshes, borders of streams, etc.; abundant on sand dunes of Emmet Co. (!) Very Common.
- Panicled Cornel. 431. paniculata, L'Her. L. P.
The white flower eagerly devoured by partridges. Common.
- Alternate-leaved C. 432. alternifolia, L. L. P.
Banks. The dead stems bright yellow. Frequent.

NYSSA

- Pepperidge. Tupelo. Black or Sour Gum. 433. multiflora, Wang. C. & S.
Edges of swamps as far north as Gratiot Co. (!). A small or medium-sized tree. Largest specimens seen, 2 to 3 ft. in diameter. Frequent.

CAPRIFOLIACEÆ.

(Honeysuckle Family.)

LINNÆA

- Twin flower. 434. borealis, Gronovius. C. N. & U. P.
Very abundant in N. & U. P.; south to Grand river valley, and S. E. to Macomb Co. Probably in S. W.

SYMPHORICARPUS

- Wolf-berry. 435. occidentalis, R. Br. C. N. & U. P.
Ft. Gratiot—Austin; N. Mich.—Gray. Rare.
- Snowberry. 436. racemosus, Mx. C. N. & U. P.
Along the Great Lakes, Saginaw bay, and Alpena Co.—Winchell; L. Sup.—Can. Cat. Not observed in interior of L. P. Common in cultivation.
- Snowberry. 437. racemosus, Mx., var. pauciflorus, Robbins. U. P.
Dr. Robbins.
- Indian Currant. Coral-berry. 438. vulgaris, Mx. (?) S.

LONICERA

- Small Honey-suckle. 439. *parviflora*, Lam.
L. Sup.—Whitney's Cat.; Petoskey(!), where it appears distinct from the next; Ann Arbor—Miss Allmendinger; Macomb Co.
- Small Honey-suckle. 440. *parviflora*, Lam., var. *Douglasii*, Gr.
Ionia(!); Montcalm Co.(!); Ann Arbor—All. Cat., etc. This and the former apparently run together in C., forms occurring that do not answer well to Gray's description of either species. Flowers bright yellow to crimson purple; corolla downy or nearly smooth; leaves glaucous. Swamps or dry soil. Common.
- Hairy H. 441. *hirsuta*, Eaton. Th.
Frequent northward; rare in C. & S., Flint, and Macomb Co.
- American Woodbine. 442. *grata*, Aiton.
Dr. Lyons.
443. *involutrata*, Banks. U. P.
Mainland and Isle Royale.
- Fly-Honey-suckle. 444. *ciliata*, Muhl. Th.
Common in C.
- Mountain F. 445. *cœrulea*, L. U. P.
Dr. Lyons.
- Swamp F. 446. *oblongifolia*. Th.
Macomb Co.; Stanton(!); Edmore(!); Isabella Co. (!), etc. More frequent in N. & U. P. Rare in S.

DIERVILLA

- Bush Honey-suckle. 447. *trifida*, Moench. (***) Th.
Rocky woods and bluffs. Very common.

TRIOSTEUM

- Horse-Gentian. 448. *perfoliatum*, L. (**) C. & S.
Fever-wort. Clinton Co.(!); Ionia Co.(!); Flint; Macomb Co., etc. Frequent.

SAMBUCUS

- Common Elder. 449. *Canadensis*, L. (*)
Sweet Elder. Follows settlements. Com.
- Red-berried Elder. 450. *pubens*, Mx. Th.
More northern in its range than the last. Variety with dissected leaves seen in Clare county.

VIBURNUM

- Sweet Viburnum. 451. *Lentago*, L.
Frequent in C. and S., and probably Th.
- Black Haw. 452. *prunifolium*, L. S.
Dr. Lyons.
- Withe-rod. 453. *nudum*, L. Th.
Macomb Co.; Hubbardston(!); Stanton(!); Riverdale, Gratiot Co.(!); Houghton Lk.(!); to L. Superior. Frequent.
- Arrow-wood. 454. *dentatum*, L.
Lansing—Bailey; Macomb Co.—Cooley. Infr.
- Downy A. 455. *pubescens*, Ph. Th.
Common.
- Maple-leaved A. 456. *acerifolium*, L. L. P.
Dockmackie. Freq.
- Few-flowered A. 457. *pauciflorum*, Pylaie. U. P.
Dr. Lyons.
- Cranberry tree. 458. *Opulus*, L. (***) Th.
Bush Cranberry. Swamps and borders of streams. Com.

Hobble-bush.
American Way-
faring tree.

459. *lantanoides*, Mx.

U. P.

Whitney's Cat. Mr. Whitney found none of the sp. abundant in the U. P.

RUBIACEÆ.

(*Madder Family*)

GALIUM

- | | | |
|-------------------------|--|------------------------|
| Cleavers. | 460. <i>Aparine</i> , L. (***) | Th. |
| Goose Grass. | 461. <i>asprellum</i> , Mx. | Th. |
| Rough Bed- straw. | 462. <i>concinnum</i> , Torr. & Gray. | Freq. C. & S. |
| | Flint; and Ann Arbor.—All. Cat. | Rare. |
| Small B. | 463. <i>trifidum</i> , L. var. <i>pusillum</i> , Gr. | Th. |
| | Sphagnous swamps. Common in C. | |
| Small B. | 464. <i>trifidum</i> , L. var. <i>tinctorum</i> , Gr. (***) | Th. |
| | Shore of Sag. Bay.—Winch. Cat., etc. | |
| Small B. | 465. <i>trifidum</i> , L. var. <i>latifolium</i> , Gr. | C. & S. Infrequent. |
| Sweet-scented B. | 466. <i>triflorum</i> , Mx. | Th. |
| | Freq. in C. & S., and very abundant northward. | |
| Hairy B. | 467. <i>pilosum</i> , Aiton. | C. & S. |
| | Frequent as far north as Grand-Saginaw Valley. | |
| Wild Liquor- ice. | 468. <i>circæzans</i> , Mx. | C. & S. Common. |
| Wild Liquor- ice. | 469. <i>lanceolatum</i> , Torrey. | Th. |
| | Riverdale, Gratiot Co. (!); Hubbardston (!); Flint; Macomb Co.; and S. Mich.—Wr. Cat.; also, L. Sup.—Whitney. | Infr. |
| Northern Bed- straw. | 470. <i>boreale</i> , L. | |
| | <i>Galium verum</i> has run wild in a few places. | Very common. |

CEPHALANTHUS

- | | | |
|--------------|-------------------------------------|--------------|
| Button-bush. | 471. <i>occidentalis</i> , L. (***) | L. P. |
| | Swamps and flooded river-bottoms. | Very common. |

MITCHELLA

- | | | |
|----------------------|---|---------|
| Partridge- berry. | 472. <i>repens</i> , L. (***) | Th. |
| | Prefers beech and maple, hemlock, or pine woods, and is seldom found under oaks. | Common. |

HOUSTONIA

- | | | |
|------------|--|-----|
| Houstonia. | 473. <i>purpurea</i> , L. (?) | |
| | Ann Arbor—Winch. Cat. | |
| Houstonia. | 474. <i>purpurea</i> , L. var. <i>longifolia</i> , Gr. | Th. |
| | Ionia (!), common; Clare Co. (!), abundant, etc.; to L. Sup.—Can. Cat. | |
| Houstonia. | 475. <i>purpurea</i> , L. var. <i>ciliolata</i> , Gr. | S. |
| | Dr. Wright. | |
| Bluets. | 476. <i>cœrulea</i> , L. (?) | |

VALERIANACEÆ.

(*Valerian Family*.)

VALERIANA

- | | | |
|-----------|--|--|
| Valerian. | 477. <i>sylvatica</i> , Mx. | |
| | Sphagnous swamps, local. Frequently cultivated. C. & S., and probably Th. | |

- Valerian. 478. *edulis*, Nutt. S. E.
Ann Arbor and Macomb county. Rare.
- FEDIA
- Corn-Salad. 479. *Fagopyrum*, Torr. & Gr. C. & S.
Lamb-Lettuce. Flint; Ionia(!); Lyons(!), etc. Not common.
- Lamb-Lettuce. 480. *radiata*, Mx. C. & S.
Mich.—Gray; Macomb Co.—Cooley. Rare.

DIPSACEÆ.

(Teasel Family.)

DIPSACUS

- Wild Teasel. 481. *sylvestris*, Mill. C. & S.
Fields and roadsides. Gratiot Co.(!); Ann Arbor; Detroit(!); Flint, etc. Infrequent.

COMPOSITÆ.

(Composite Family.)

VERNONIA

- Iron-Weed. 482. *Baldwinii*, Gr. C. & S.
River banks. Flint; S. Mich.—Wright's Cat. Infrequent.
- Iron-Weed. 483. *fasciculata*, Michx. C. & S.
River banks. Ionia Co.(!); Macomb Co.; Lansing, and South Haven—Bailey. Common.

LIATRIS

- Blazing-Star. 484. *squarrosa*, Willd. (***) C. & S.
Montcalm Co.(!); Macomb Co.; Ann Arbor; Grand Rapids. Dry soil. Infrequent.
- Button-Snake-root. 485. *cylindracea*, Michx. C. & S.
Ionia Co.(!); Macomb Co., and southward. Sterile open places. Not common.
- Blazing-Star. 486. *scariosa*, Willd. (***) C. & S.
Rarely the flowers vary to white. Dry soil. Frequent.
- Blazing-Star. 487. *spicata*, Willd. (***) C. & S.
Gay Feather. Low grounds. Near Lansing; Ionia Co.(!); Macomb Co. Infrequent.
- Blazing-Star. 488. *pycnostachya*, Michx. S.
Barrens. Near Mont Lake—Miss Clark; Grand Rapids—Coleman's Cat. Infrequent.

KUHNIA

- Kuhnia. 489. *eupatorioides*, L. C. & S.
Ionia Co.(!); S. Mich.—Winch. Cat. Infrequent.

EUPATORIUM

- Joe-Pye Weed. 490. *purpureum*, L. (***) Th.
Low grounds. Common.
- Tall Boneset. 491. *altissimum*, L. (?) S.
- Smooth Boneset. 492. *sessilifolium*, L. S.
Copses. Macomb Co.; S. Mich.—Winch. Cat.
- Thoroughwort. 493. *perfoliatum*, L. (*) Th.
Boneset. Low grounds. Common.
- White Snake-root. 494. *ageratoides*, L. Th.
Woods. Frequent.

CONOCLINIUM

- Mist-Flower. 495. *cœlestinum*, DC.
"Rich soil. Michigan."—Gray.

NARDOSMIA

- Sweet Colts-foot. 496. *palmata*, Hook. N.
"Swamps, Michigan, rare."—Gray.

TUSSILAGO

- Coltsfoot. 497. *Farfara*, L. (***)
Sault de Ste. Marie—Whitney's Cat.

ADENOCAULON

- Adenocaulon. 498. *bicolor*, Hook. U. P.
Moist ground. Ontonagon River.

SERICOCARPUS

- White Topped Aster. 499. *conyzoides*, Nees. (?) S.

ASTER

- Starwort. 500. *corymbosus*, Ait. Th.
Aster. Woods. Infrequent.
Large-leaved Aster. 501. *macrophyllus*, L. Th.
Woods. Common.
Silky Aster. 502. *sericeus*, Vent. S.
S. Michigan—Winch. Cat.; Dr. D. Houghton.

BARRENS

- Spreading Aster. 503. *patens*, Ait. S. E.
Dry grounds. Ann Arbor; Macomb Co.
Smooth Aster. 504. *lævis*, L., var. *lævigatus*, Gray. C. & S.
Border of oak woods. Common.
Azure Aster. 505. *azureus*, Lindl. C. & S.
Sterile soil. Flint; Ann Arbor; Ionia Co. (!); Macomb Co. Infrequent.
Wavy Aster. 506. *undulatus*, L. S.
Dry copses. Flint; Lansing (!); S. Mich. Common.
Heart-leaved Aster. 507. *cordifolius*, L. Th.
Woods. Common.
Arrow-leaved Aster. 508. *sagittifolius*, Willd. Th.
Dry grounds. Frequent.
Heath-like Aster. 509. *ericoides*, L., var. *villosus*, Gr.
Dry places. Ann Arbor; Flint; Drummond's Is.
Many-flowered Aster. 510. *multiflorus*, Ait. C. & S.
Sandy soil. Common.
511. *dumosus*, L. L. P.
Thickets. Macomb Co.; Petoskey—Dr. D. Clark.
Tradescants' Aster. 512. *Tradescanti*, L. C. & S.
Low grounds. Frequent.
Dwarf Aster. 513. *miser*, L., Ait. L. P.
Fields. Exceedingly variable. Common.
Pale Aster. 514. *simplex*, Willd. L. P.
Shady banks. Flint, etc. Frequent.
Thin-leaved Aster. 515. *tenuifolius*, J. C. & S.
Low grounds. Flint; Macomb Co. Frequent.
Flesh-colored Aster. 516. *carneus*, Nees. L. P.
Moist soil. Flint; Macomb Co. Frequent.

517. *æstivus*, Ait. Th.
Swamps. Ionia Co. (!); Flint; Macomb Co., etc. Frequent.
- Long-leaved Aster. 518. *longifolius*, Lam. Th.
Moist grounds. Ann Arbor—Winch. Cat.; U. P.—Whitney Cat. Infrequent.
519. *puniceus*, L. Th.
Low grounds. Common.
520. *puniceus*, L., var. *vimineus*, Gray.
Kent Co.; Flint.
- New England Aster. 521. *Novæ-Angliæ*, L. C. & S.
Moist grounds. Worthy of cultivation. Frequent.
- Grass-leaved Aster. 522. *graminifolius*, Pursh. U. P.
"Lake Superior, and northward"—Gray; Dr. Lyons.
523. *acuminatus*, Michx.
S. Mich.—Wright's Cat.; U. P.—Whitney's Cat.
524. *ptarmicoides*, Torr. and Gray. Th.
S. E. Michigan; Macomb Co.; and northward.

ERIGERON

- Horse Weed. 525. *Canadense*, L. (*) Th.
Butter Weed. Waste grounds. Common.
526. *acre*, L. U. P.
"Shores of Lake Superior"—Gray; Dr. A. B. Lyons.
- Robin's Plantain. 527. *bellidifolium*, Muhl. C. & S.
Moist banks. Frequent.
- Common Fleabane. 528. *Philadelphicum*, L. (*) Th.
Low grounds. Common.
529. *glabellum*, Nutt. U. P.
Plains. Dr. A. B. Lyons.
- Daisy Fleabane. 530. *annuum*, Pers. (***) L. P.
Sweet Scabious. Fields. Common.
- Daisy Fleabane. 531. *strigosum*, Muhl. Th.
Fields. Common.

DIPLOPAPPUS

- Double-bristled Aster. 532. *linariifolius*, Hook.
Dry soil. Dr. A. B. Lyons.
- Double-bristled Aster. 533. *umbellatus*, T. & G. Th.
Moist places. Ionia Co. (!); Flint; Macomb Co.; and northward. Frequent.

SOLIDAGO

- Golden-rod. 534. *bicolor*, L.
Macomb Co.; Ionia Co. (!).
- Golden-rod. 535. *bicolor*, L., var. *concolor*, Gr. Th.
Dry places. Ionia Co. (!); Flint; Macomb Co.; and northward. Apparently more common than the species.
- Golden-rod. 536. *latifolia*, L. Th.
Moist woods, frequent. All golden-rods furnish bees with pollen and honey, some, however, more abundantly than others. A great many plants, in fact, furnish bees with honey, and, contrary to a common notion among "bee men," almost every plant one meets, especially if it have showy flowers, is quite likely to be "an excellent bee plant."
- Golden rod. 537. *cæsea*, L. L. P.
Rich woods. Frequent.
- Golden-rod. 538. *stricta*, Ait.
Swamps. Ingham Co. (!); Ionia Co. (!); and northward. Occurs in great abundance near Lansing. Infrequent.

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| Golden-rod. | 539. <i>speciosa</i> , Nutt. | C. & S. Oak woods. Ionia Co. (!); Flint; Macomb Co.; and southward. Frequent. |
| Golden-rod. | 540. <i>Virga-aurea</i> , L., var. <i>humilis</i> , Gr. | Shores of L. Michigan from So. Haven northward; frequent at Petoskey. |
| Golden-rod. | 541. <i>Virga-aurea</i> , var. <i>L. alpina</i> , Bigel. | U. P. Dr. Gray. |
| Golden-rod. | 542. <i>rigida</i> , L. | C. & S. Dry, sandy ground. Ionia Co. (!); Flint; Ann Arbor; and southward. Worthy of cultivation. Infrequent. |
| Golden-rod. | 543. <i>thyrsoides</i> , E. Meyer. | U. P. "Wooded sides of mountains."—Gray. |
| Golden-rod. | 544. <i>Ohioensis</i> , Riddell. | L. P. Moist meadows. Ionia Co. (!); Flint; Macomb Co.; and northward. Frequent. |
| Golden-rod. | 545. <i>Riddellii</i> , Frank. | L. P. Swamps. Ionia Co. (!); Macomb Co.; and northward. Frequent. |
| Golden-rod. | 546. <i>Houghtonii</i> , Torr. & Gray. | "North shore Lake Michigan."—Gray; Drummond's Is.—Winch. Cat. |
| Golden-rod. | 547. <i>neglecta</i> , T. & Gr. | Swamps. Ionia Co., and northward. Infrequent. |
| Golden-rod. | 548. <i>patula</i> , Muhl. | C. & S. Borders of swamps. Common. |
| Golden-rod. | 549. <i>arguta</i> , Ait. | Th. Meadows and fields, variable. Varieties <i>juncea</i> and <i>scabrella</i> both occur. Frequent. |
| Golden-rod. | 550. <i>Muhlenbergii</i> , Torr. & Gray. | Low grounds. Ionia Co. (!); Flint; Grand Rapids.—Coleman's Cat. |
| Golden-rod. | 551. <i>altissima</i> , L. | Th. Borders of fields. Common. |
| Golden-rod. | 552. <i>ulmifolia</i> , Muhl. | L. P. Borders of woods. Ionia Co. (!); Flint; S. W.—Winch. Cat. Infrequent. |
| Golden-rod. | 553. <i>memoralis</i> , Ait. | Th. Dry, sandy soil. Common. |
| Golden-rod. | 554. <i>Canadensis</i> , L. | Th. Fields. Common. |
| Golden-rod. | 555. <i>serotina</i> , Ait. | Th. Borders of woods. Frequent. |
| Golden-rod. | 556. <i>gigantea</i> , Ait. | C. & S. Copses and fence rows. Common. |
| Golden-rod. | 557. <i>lanceolata</i> , L. | Th. Moist soil. Frequent. |

INULA

| | | |
|-------------|--------------------------------|---|
| Elecampane. | 558. <i>Helenium</i> , L. (**) | Roadsides,—escaped from gardens. Infrequent. |
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POLYMNIA

| | | |
|------------------|---------------------------------|--|
| Leaf-cup. | 559. <i>Canadensis</i> , L. | C. & S. Shaded river banks. Ionia Co. (!); Macomb Co.; Flint; S. Michigan. Infrequent. |
| Yellow Leaf-cup. | 560. <i>Uvedalia</i> , L. (***) | S. S. Michigan,—Wright's Cat. |

SILPHIUM

- Rosin-weed. Compass Plant. 561. *laciniatum*, L. S.
S. Mich.—Wright's Cat.
- Prairie Dock. 562. *terebinthinaceum*, L. (***) C. & S.
Oak openings. Ionia (!); Macomb Co.; and southward. Infrequent
563. *integrifolium*, Michx.
S. W.—University Herb.
- Cup-plant. 564. *perfoliatum*, L.
S. Mich.—Wright's Cat.

AMBROSIA

- Great Rag-weed. 565. *trifida*, L. (***) C. & S.
Low grounds along Grand and Maple Rivers, abundant, etc.
- Roman Worm-wood. 566. *artemisæfolia*. (***) C. & S.
Rag-weed. Roadsides. A worthless weed. Abundant.
Hog-weed.
Bitter-weed.

XANTHIUM

- Common Cocklebur. 567. *strumarium*, L., var. *echinatum*, Gr. (**) C. & S.
Waste places and along river banks. Common.

HELIOPSIS

- Ox-eye. 568. *lævis*, Pers., var. *scabra*, Gr. C. & S.
Banks. Common.

ECHINACEA

- Purple Cone-flower. 569. *purpurea*, Mœnch. S. W.
Univ. Herb.

RUDBECKIA

- Cone-flower. 570. *laciniata*, L. (***) Th.
Low grounds. Frequent.
- Cone-flower. 571. *speciosa*, Wenderoth. C. & S.
Dry soil. Ionia Co. (!); Flint; Macomb Co.; Ann Arbor. Frequent.
- Cone-flower. 572. *fulgida*, Ait. C. & S.
Ann Arbor.—Miss Clark; Grand Rapids.—Coleman's Cat., etc.
- Cone-flower. 573. *hirta*, L. Th.
Dry soil. Common.

LEPACHYS

574. *pinnata*, T. & G. C. & S.
Dry ground. Ionia Co. (!); Grand Rapids; S. Mich. Infrequent.

HELIANTHUS

- Sunflower. 575. *rigidus*, Desf. S.
Dry soil. Ann Arbor.—Winch. Cat.
- Sunflower. 576. *lætiflorus*, Pers. C. & S.
Grand Rapids.—Coleman's Cat.
- Sunflower. 577. *occidentalis*, Riddell. C. & S.
Sterile soil. Ionia Co. (!); Flint; Grand Rapids; Macomb Co.; etc. Infrequent.
- Sunflower. 578. *giganteus*, L. C. & S.
Low grounds; variable. Ionia Co. (!); Flint; Ann Arbor; Macomb Co. Forms of this and the following species are very puzzling, and the two ought probably to be considered as one polymorphous species. Com.
- Sunflower. 579. *grosse-serratus*, Martens. Frequent.
Dry plains. Ionia (!); Grand Rapids, etc.

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|-------------------------|---|----------------------|
| Sunflower. | 580. <i>divaricatus</i> , L. | C. & S. Common. |
| | Dry woods. | |
| Sunflower. | 581. <i>strumosus</i> , L. | C. & S. Frequent. |
| | Dry soil. | |
| Sunflower. | 582. <i>hirsutus</i> , Raf. | C. & S. |
| | Dry soil. Flint; Grand Rapids,—Coleman's Cat.; Ann Arbor; and S. W. | |
| Sunflower. | 583. <i>trachelifolius</i> , Willd. | C. & S. |
| | Copses. Grand Rapids,—Coleman's Cat.; S. Mich.—Wright's Cat. | |
| Sunflower. | 584. <i>decapetalus</i> , L. | C. & S. Frequent. |
| | Low grounds. | |
| Sunflower. | 585. <i>doronicoides</i> , Lam. | C. & S. |
| | Banks of Maple and Grand River (!); Ann Arbor; and Grand Rapids. | |
| Jerusalem Artichoke. | 586. <i>tuberosus</i> , L. | |
| | Sparingly escaped from gardens. | |

ACTINOMERIS

| | | |
|--------------|-----------------------------------|----|
| Actinomeris. | 587. <i>squarrosa</i> , Nutt. | S. |
| | Rich soil. S. Mich.—Wright's Cat. | |

COREOPSIS

| | | |
|------------|---|---------|
| Coreopsis. | 588. <i>lanceolata</i> , L. | |
| | Sandy shores of Lake Huron; Little Traverse Bay; and Lake Superior. Worthy of cultivation for its showy flowers. | |
| Coreopsis. | 589. <i>verticillata</i> , L. | |
| | Gray, and Lyons. | |
| Coreopsis. | 590. <i>palmata</i> , Nutt. | |
| | S. Mich.—Wright's Cat. | |
| Coreopsis. | 591. <i>tripteris</i> , L. | S. |
| | Detroit(!); Macomb Co.; Oakland Co.(!); S. Mich.—Wright's Cat. Not seen in C. and W. part of the State. | |
| Coreopsis. | 592. <i>aristosa</i> , Michx. | C. & S. |
| | Swamps. Ionia Co.(!); Lansing (!); Grand Rapids; S. Mich.—Univ. Herb. Frequent. | |
| Coreopsis. | 593. <i>trichosperma</i> , Michx. | C. & S. |
| | Swamps. Flint; Montcalm Co.(!); Ionia Co.(!); S. Mich.—Wright's Cat. Common in pine country, infrequent elsewhere. Flowers a beautiful golden yellow. Frequently, in September, swamps of large size may be seen so full of this <i>Coreopsis</i> that at a little distance they seem one mass of yellow. | |
| Coreopsis. | 594. <i>discoidea</i> , Torr. & Gray. | |
| | Wet ground. Ionia Co. | Scarce. |

BIDENS

| | | |
|--------------------------|--|----------------------|
| Common Beggar-ticks. | 595. <i>frondosa</i> , L. | C. & S. Common. |
| | Low grounds. A troublesome weed. | |
| Swamp Beggar-ticks. | 596. <i>connata</i> , Muhl. | C. & S. Common. |
| | Low grounds. | |
| Nodding Bur Marigold. | 597. <i>cernua</i> , L. | C. & S. Frequent. |
| | Wet places. | |
| Bur-Mari- gold. | 598. <i>chrysanthemoides</i> , Michx. | Th. Common. |
| | Swamps. | |
| Water Mari- gold. | 599. <i>Beckii</i> , Torr. | |
| | S. Mich.—Wright's Cat.; Ann Arbor; Wexford Co.—Cooley. Not observed in the central part of the State. | |

HELENIUM

- Sneeze-weed. 600. *autumnale*, L. (***) C. & S.
River banks. Common.

MARUTA

- Mayweed. 601. *Cotula*, DC. (**) Th.
Dog Fennel. Roadsides, etc. Everywhere very common.

ACHILLEA

- Common 602. *Millefolium*, L. (**) Th.
Yarrow. Fields. Common.

LEUCANTHEMUM

- Ox-eye Daisy. 603. *vulgare*, Lam. Th.
Meadows and pastures. A vile weed, becoming frequent in E. & S. parts
of the State.

MATRICARIA

604. *inodora*, L. Rare.
Flint.

TANACETUM

- Tansy. 605. *vulgare*, L. (**) Frequent.
Escaped from gardens.
606. *Huronense*, Nutt.
Sand dunes at the head of Little Traverse Bay, and northward.
Frequent.

ARTEMISIA

607. *borealis*, Pallas.
"Shore of Lake Superior and northward."—Gray.
Wild Worm 608. *Canadensis*, Michx. C. N. & U. P.
wood. Sand dunes. Ottawa Co.; Emmet Co.; to Lake Superior.
609. *caudata*, Michx. C. & S.
Sandy fields. Ionia Co. (!); Montcalm Co. (!); S. Haven.—Bailey.
Infrequent.
Western Mug- 610. *Ludoviciana*, Nutt., var. *gnaphalodes*, Gr. S. W.
wort. Dry banks. Niles.—J. T. Scoville; Univ. Herb.
Common Mug- 611. *vulgaris*, L. (***) In frequent.
wort. Waste places.
Biennial 612. *biennis*, Willd.
Wormwood. A road-side weed, lately introduced and rapidly extending throughout
the State.
Common 613. *Absinthium*, L. (*)
Wormwood. Ionia Co. (!); Flint; Gratiot Co. (!). Sparingly escaped from gardens.
614. *frigida*, Willd. U. P.
"Lake Superior."—Gray.

GNAPHALIUM

- Everlasting. 615. *decurrens*, Ives. Th.
Fields. Abundant in the pine region. Cultivated as an "Immortelle"
in Germany. Common.
Common Ever- 616. *polycepalum*, Michx. (***) Th.
lasting. Fields. Common.
Low Cud- 617. *uliginosum*, L. C. & S.
weed. Roadsides in clayey soil. Frequent.
Purplish C. 618. *purpureum*, L.
Only reported from Macomb Co. by Dr. D. Cooley.

ANAPHALIS

- Pearly Ever-
lasting. 619. *margaritacea*, Benth. & Hook. (***)
Montcalm Co. (!); Petoskey (!); and Mackinac. Infrequent.

ANTENNARIA

- Plantain-
leaved Ever-
lasting. 620. *plantaginifolia*, Hook. Th.
Dry fields. Common.

ERECITHITES

- Fireweed. 621. *hieracifolia*, Raf. (***) L. P.
New clearings. Common.

CACALIA

- Indian Plan-
tain. 622. *suaveolens*, L.
Lodi.—Miss Clark, in Winch. Cat.
Pale Indian
Plantain. 623. *atriplicifolia*, L. C. & S.
Woods. Ionia Co. (!); S. Mich.—Wright's Cat. Frequent.
Tuberous
Indian Plan-
tain. 624. *tuberosa*, Nutt. S.
S. Mich.—Wright's Cat.

SENECIO

- Common
Groundsel. 625. *vulgaris*, L.
Flint; Macomb Co.; S. W. Mich.—Wright's Cat.
Golden rag-
wort. 626. *aureus*, L. Th.
Squaw-weed. Common.
Life-root. 627. *aureus*, L., var. *obovatus*, Gr.
More common southward.
628. *aureus*, L., var. *Balsamitæ*, Gr. Th.
Dry ground. Abundant northward.

ARNICA

- Arnica. 629. *mollis*, Hook. U. P.
"Shores of Lake Superior and N. W."—Gray; Copper Harbor—Whitney's
Cat.

CNICUS

- Common
Thistle. 630. *lanceolatus*, Hoffm. Th.
Road-sides and fields. Common.
Pitcher's
Thistle. 631. *Pitcheri*, Torr.
Sand dunes. South Haven; and northward to L. Superior; Sand point,
Saginaw Bay. Frequent.
632. *undulatus* (Spreng.). N. & U. P.
"Islands of L. Huron and Michigan."—Gray; Drummond's I.—Winch. Cat.
633. *discolor*, Muhl. C. & S.
Meadows. Montcalm Co. (!); Ionia Co. (!); Flint; and southward. Flowers
sometimes white. Infrequent.
Tall Thistle. 634. *altissimus*, Willd. C. & S.
Dry fields. Ionia Co. (!); Flint; Macomb Co. Infrequent.
Swamp
Thistle. 635. *muticus*, Ph. Th.
Swamps. Flowers sometimes white. Frequent.
Pasture
Thistle. 636. *pumilus*, Torr. S.
S. W. Mich.—Wright's Cat.; Grand Rapids—Coleman's Cat.
Canada
Thistle. 637. *arvensis*, Hoffm. Th.
Fields. A vile pest. Infrequent in centre of the State, but increasing
rapidly, and already troublesome in some localities. Our Canada thistle
law ought to be rigidly enforced.

ONOPORDON

- Cotton, or Scotch Thistle. 638. *Acanthium*, L.
Grand Rapids (!). Rare.

LAPPA

- Burdock. 639. *officinalis*, All., var. *major*, Gr. (**)
Waste places. Th. Common.

CICHORIUM

- Succory or Chicory. 640. *Intybus*, L. (***)
Ionia Co.(!); Flint; Detroit, etc. Roadsides. Th. Infrequent.

KRIGIA

- Dwarf Dandelion. 641. *Virginica*, Willd.
Barrens. N. part of Clare Co.(!)

CYNTHIA

- Cynthia. 642. *Virginica*, Don.
Moist hillsides. C. & S. Frequent.

HIERACIUM

- Canada Hawkweed. 643. *Canadense*, Michx. (***)
Woods. Th. Frequent.
- Rough Hawkweed. 644. *scabrum*, Michx. (***)
Woods. Th. Common.
- Long-bearded Hawkweed. 645. *longipilum*, Torr.
Fields. Macomb Co.; Traverse City; S. W.—Wright Cat. L. P. Scarce.
- Hairy Hawkweed. 646. *Gronovii*, L. (***)
Dry soil. Ionia Co.(!); Flint; Macomb Co.; S. W. Mich.—Wright Cat. C. & S. Infrequent.
- Rattlesnake weed. 647. *venosum*, L. (***)
Dry soil in pine woods, or on oak land. A form has been seen at Ionia not having purple veins in the root leaves. L. P. Frequent.
- Panicle Hawkweed. 648. *paniculatum*, L.
Lansing(!); Macomb Co.; S. Mich.—Wright Cat. C. & S. Scarce.

NABALUS

- White Lettuce. 649. *albus*, Hook. (***)
Woods. Th. Common.
- Tall White Lettuce. 650. *altissimus*, Hook.
Rich woods. Th. Frequent.
651. *racemosus*, Hook.
Flint; Macomb Co.; shore of L. Mich., near Sitting Rabbit—Winch. Cat.; S. W.—Wright Cat., etc. Th.
652. *asper*, Torr. & Gray. (?) S.

TARAXICUM

- Dandelion. 653. *Dens-leonis*, Desf. (*)
Fields everywhere. Th.

LACTUCA

- Wild Lettuce. 654. *Canadensis*, L.
Rich soil. Th. Frequent.
- Wild Lettuce. 655. *integrifolia*, Bigel. (?)
- Wild Lettuce. 656. *sanguinea*, Bigel.
Hubbardston(!); Gratiot Co.(!), etc. C. & S. Common.
- False blue Lettuce. 657. *foliosa*.
Flint; Macomb Co.; and northward to L. Superior.

- Wild Lettuce. 658. *pulchella*, DC. U. P.
 "Upper Michigan,"—Prof. Porter.
 Wild Lettuce. 659. *villosa*, Jacq.
 Macomb Co.—Dr. D. Cooley.
 Wild Lettuce. 660. *Floridana*, Gærtn.
 Grand Rapids—Coleman's Cat.

SONCHUS

- Common Sow- 661. *oleraceus*, L.
 Thistle. Waste places. Macomb Co.; Montcalm Co. (!); northward to L. Superior.
 Frequent.
 Spiny-leaved 662. *asper*, Vill.
 Sow-Thistle. Waste places. Th.
 Frequent.
 Field Sow- 663. *arvensis*, L.
 Thistle. Grand Rapids—Coleman's Cat.

LOBELIACEÆ.

(Lobelia Family.)

LOBELIA

- Cardinal 664. *cardinalis*, L. (***) Th.
 Flower. River banks. Flowers rarely rose-colored or even white. Showy and
 easily cultivated. Common.
 Great Lobelia. 665. *syphilitica*, L. (***) L. P.
 Blue Lobelia. Low grounds. Flowers vary to white. Common.
 666. *Dortmanna*, L. U. P.
 Isle Royale—Dr. A. B. Lyons.
 667. *spicata*, Lam. L. P.
 Oak openings. Frequent.
 Kalm's Lo- 668. *Kalmii*, L. Th.
 belia. Wet banks, and rocks along shore. Ionia Co. (!); Ann Arbor; Oakland
 Dwarf Blue L. Co. (!); Petoskey (!); to L. Superior. Frequent.
 Indian To- 669. *inflata*, L. (*) C. & S.
 bacco. Pastures. Montcalm Co. (!); Flint; Macomb Co.; Oakland Co. (!); Put-in
 Bay. Scarce.

CAMPANULACEÆ.

(Bell-flower Family.)

SPECULARIA

- Venus's Look 670. *perfoliata*, A. DC. C. & S.
 ing-glass. Gravelly fields. Clinton Co. (!); S. E.—University Herb, etc. Scarce.

CAMPANULA

- Harebell. 671. *rotundifolia*, L. Th.
 Bluebell. A very pretty species, worthy to be cultivated in every garden. A can-
 escent form grows at Burt's Lake, Cheboygan Co.—var. *canescens*,
 Hill. Sandy banks and lake shores. Common.
 Marsh Bell- 672. *aparinoides*, Ph. Th.
 flower. Wet grassy grounds. Common.
 Tall Bell- 673. *Americana*, L. C. & S.
 flower. Moist woodlands. Ionia Co. (!); Flint; Macomb Co.; Ann Arbor—Winch.
 Cat. Frequent.

ERICACEÆ.

(Heath Family.)

GAYLUSSACIA

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|--------------------------------------|---|-----------|
| Blue Tangle, or Blue Huckleberry. | 674. frondosa, Torr. & Gray. | C. & S. |
| | Low copses. Flint; Ypsilanti (!); Ann Arbor—Winch. Cat. | Scarce. |
| Black Huckleberry. | 675. resinosa, Torr. & Gray. | Th. |
| | Hillsides. | Frequent. |

VACCINIUM

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|---------------------------|---|---------|
| Dwarf Blueberry. | 676. Pennsylvanicum, Lam. | Th. |
| | Dry hills and barrens. "The lowest and earliest-fruited of the blueberries"—Gray, Synopt. Flora of N. A. | Common. |
| Canada Blueberry. | 677. Canadense, Kalm. | Th. |
| | Swamps. | Common. |
| Low Blueberry. | 678. vacillans, Solander. | Th. |
| | Barrens. Common northward, but rare in C. & S. This species furnishes large quantities of berries for market in the northern lake region. | |
| Swamp Blueberry. | 679. corymbosum, L. | Th. |
| | Swamps. Yielding abundantly; variable. | Common. |
| | 680. uliginosum, L. | U. P. |
| | "Shore of Lake Superior"—Gray; Isle Royale and White Fish Pt., L. Superior—Henry Gillman. | |
| Bilberry. | 681. cæspitosum, Michx., var. cuneifolium, Nutt. | U. P. |
| | Gray, Fl. N. A.; Lyons. | |
| | 682. myrtilloides, Hook. | U. P. |
| | "Damp woods L. Superior."—Gray, Fl. N. A. | |
| | 683. ovalifolium, Smith. | U. P. |
| | Woods Lake Superior, S. shore—Robbins. | |
| Cowberry. | 684. Vitis-Idæa, L. (?) | |
| Mountain Cranberry. | N. shore L. Superior—Dr. A. B. Lyons; and probably in our district. | |
| Small Cranberry. | 685. Oxycoccus, L. | Th. |
| | Sphagnous Swamps. Ann Arbor; Ionia Co. (!); and northward. Infrequent. | |
| Large American Cranberry. | 686. macrocarpon, Ait. | Th. |
| | Bogs. The common Cranberry of the market. | Common. |

CHIOGENES

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|---------------------|--|-------------|
| Creeping Snowberry. | 687. hispidula, Torr. and Gray. | Th. |
| | S. Mich.—Wright's Cat; Ionia Co. (!); Montcalm Co. (!); Petoskey (!), etc. | Infrequent. |

ARCTOSTAPHYLOS

- | | | |
|------------|--|-----|
| Bearberry. | 688. Uva-ursi, Spreng. (*) | Th. |
| | Sandy soil. Abundant northward, but rare S. of lat. 43°. | |

EPIGÆA

- | | | |
|--|--|-----|
| Trailing Arbutus. May Flower. Ground Laurel. | 689. repens, L. (***) | Th. |
| | Borders of marshes, and woods in sandy soil. Rare S., frequent in C., and common northward. Specimens with double flowers were found in the vicinity of Hubbardston in 1879. | |

GAULTHERIA

- | | | |
|----------------------------|-----------------------------------|---------|
| Wintergreen. Checkerberry. | 690. procumbens, L. (*) | Th. |
| | Low woods, and borders of swamps. | Common. |

ANDROMEDA

- | | | |
|----------------|--|-----|
| Wild Rosemary. | 691. polifolia, L. | Th. |
| | Sphagnous swamps, S. Mich.—Wright's Cat.; Ionia Co. (!). Frequent. | |

CASSANDRA

- Leather-leaf. 692. *calyculata*, Don. Th.
Swamps. Common.

KALMIA

- Sheep Laurel. 693. *angustifolia*, L. (***)
Lamb-kill. Hillsides. Tawas City and Thunder Bay, common—Winch. Cat.
Swamp Laur'l. 694. *glauca*, Ait. (***) Th.
Bogs. S. Mich.—Wright Cat.; Ionia Co.(!); Macomb Co.; northward.
Infrequent.

LEDUM

- Labrador Tea. 695. *latifolium*, Ait. (***) C. N. & U. P.
Swamps and bogs. Common northward, but not observed south of Far-
well, Clare Co.

CHIMAPHILA

- Pipsissewa. 696. *umbellata*, Nutt. (*) Th.
Prince's Pine. Pine woods. Common.
Spotted 697. *maculata*, Pursh. (***) C. & S.
Wintergreen. Oak woods. Ionia(!); Bangor and South Haven, Van Buren Co.; Flint.
Rare or local.

MONESES

- Moneses. 698. *uniflora*, Gray.
Ore-flowered Pine forests. Flowers very fragrant when a little wilted. Montcalm
Pyrola. Co.(!); Flint; Ft. Gratiot—Winch. Cat.; and northward. Rare.

PYROLA

- Shin-leaf. 699. *minor*, L. U. P.
Wintergreen. "Cold woods, L. Superior"—Gray.
Shin-leaf. 700. *secunda*, L. Th.
Wintergreen. Rich woods. Common.
Shin-leaf. 701. *chlorantha*, Swartz. C. N. & U. P.
Wintergreen. Pine woods. Rare south of lat. 43° Frequent.
Shin-leaf. 702. *elliptica*, Nutt.
Wintergreen. Rich woods. Ann Arbor; Ionia Co.(!); northward to L. Superior.
Common.
Pear-leaf 703. *rotundifolia*, L. Th.
Wintergreen. Dry oak woods. Common.
704. *rotundifolia*, L., var. *asarifolia*, Hook.
The Cove, L. Huron—Winch. Cat.
705. *rotundifolia*, L., var. *uliginosa*, Gray.
L. Superior—Prof. J. Macoun.

PTEROSPORA

- Pine-drops. 706. *andromeda*, Nutt.
Sitting Rabbit—Winch. Cat.; Carp river, U. P.—Whitney Cat.

MONOTROPA

- Indian Pipe. 707. *uniflora*, L. Th.
Corpse-plant. Damp woods. Frequent.
Pine Sap. 708. *Hypopitys*, L.
False Beech- Oak and pine woods. Macomb Co.; Ft. Gratiot—Austin; to Ontonagon
drops. River, L. Superior—Whitney Cat. Infrequent.

AQUIFOLIACEÆ.

(Holly Family.)

ILEX

- Black Alder. Winterberry. 709. *verticillata*, Gray. (**)
Th.
Low grounds. The bright red berries are very noticeable in swamps during the winter. This shrub is readily transplanted, and should be oftener planted in small grounds.

NEMOPANTHES

- Mountain Holly. 710. *Canadensis*, DC.
Th.
Borders of swamps. S. Mich.—Wright Cat.; Ionia Co.(!); Montcalm Co.(!); Flint; Macomb Co.; and northward.
Frequent.

PLANTAGINACEÆ.

(Plantain Family.)

PLANTAGO

711. *cordata*, Lam.
C. & S.
Borders of streams. S. Mich.—Wright Cat.; Tuscola Co.—Winch. Cat.; Ionia Co.(!); Clinton Co.(!); Flint; Macomb Co.
Common Plantain. 712. *major*, L. (***)
Th.
Waysides and about dwellings everywhere. Decaisne's variety *minima* occurs in salt marshes,—Maple river, Clinton Co., etc.
713. *Rugeli*, Decaisne.
Waste places. Often confounded with the previous species. Frequent.
Ripple-grass. Rib-grass. English Plantain. 714. *lanceolata*, L. (***)
C. & S.
Meadows and fields.
Too common.
715. *Virginica*, L. (?)
Coleman Cat.

PRIMULACEÆ.

(Primrose Family.)

DODECATHEON

- Shooting Star. American Cowslip. 716. *Meadia*, L.
S.
Moist, shaded grounds. Gray, Flora of N. A.; Dr. A. B. Lyons.

PRIMULA

- Primrose. 717. *farinosa*, L.
N. & U. P.
Shores of Little Traverse Bay(!); Drummond's Island—Winch. Cat.; L. Superior—Whitney Cat.
718. *Mistassinica*, Mx.
S. E.—University Herb; Lake Superior—Whitney Cat.

TRIENTALIS.

- Star-flower. Chickweed. Wintergreen. 719. *Americana*, Pursh.
Th.
Damp woods.
Common.

STEIRONEMA

- Loosestrife. 720. *ciliatum*, Raf.
Th.
Swamps.
Common.
Loosestrife. 721. *lanceolatum*, Gray, var. *hybridum*, Gr.
C. & S.
Low grounds. Exceedingly variable.
Frequent.
Loosestrife. 722. *longifolium*, Gray.
C. & S.
Banks of streams. Ann Arbor and Ft. Gratiot—Winch. Cat.; Ionia Co.(!); Flint, etc.
Frequent.

LYSIMACHIA

- Loosestrife. 723. *quadrifolia*, L. C. & S.
Sandy soil. Ann Arbor—Winch. Cat.; Ionia Co.(!); Montcalm Co.(!); Flint; Macomb Co.
- Loosestrife. 724. *stricta*, Ait. Th.
Borders of marshes. A form of this species was found in a sphagnum swamp near Hubbardston, bearing bulblets in the axils instead of flowers. Frequent.
- Tufted Loosestrife. 725. *thyrsiflora*, L. Th.
Swampy soil. Common.

ANAGALLIS

- Common Pimpernel. 726. *arvensis*, L. (***)
Ann Arbor—Mary H. Clark.

SAMOLUS

- Water Pimpernel. 727. *Valerandi*, L., var. *Americanus*, Gray.
Springy places. Common along Maple river(!); Flint; Macomb Co.; N. W.—University Herb.

LENTIBULACEÆ.

(Bladderwort Family.)

UTRICULARIA

- Bladderwort. 728. *vulgaris*, L. Th.
Slow streams. Throat of corolla orange, veined with brown-purple. Frequent.
- Bladderwort. 729. *minor*, L. Th.
Shallow water. Ann Arbor—Winch. Cat.; Hubbardston(!); Montcalm Co.(!).
- Bladderwort. 730. *intermedia*, Hayne. Th.
Shallow water. Ann Arbor—Winch. Cat.; Macomb Co.; northward. Infrequent.
- Bladderwort. 731. *gibba*, L.
Old Mission, Grand Traverse Co.—E. J. Hill.
- Bladderwort. 732. *resupinata*, B. D. Greene.
Very abundant on the east shore of Woodard lake, in Ionia Co., the only known locality in the State. Was found near Erie, Pa., last year. Dr. Wright's *U. purpurea* is probably this species.

PINGUICULA

- Butterwort. 733. *vulgaris*, L. U. P.
Wet rocks. Whitney's Catalogue; Isle Royale,—Dr. A. B. Lyons.

OROBANCHACEÆ.

(Broom-rape Family.)

APHYLLON

- One-flowered Cancer-root. 734. *uniflorum*, Gray. (***) Th.
Damp woodlands. S. Mich.—Wright Cat.; Flint; Lake Superior.—Whit. Infrequent.
735. *fasciculatum*, Gray.
"Sandy ground, Lake Michigan,"—Gray.

CONOPHOLIS

- Squaw-root. 736. *Americana*, Wallr. (***)
Moist Woods. Ann Arbor; S. Mich.—Wright Cat.; Ionia Co.(!); Flint; Macomb Co.

EPIPHEGUS

- Beech-drops. 737. *Virginiana*, Bart. (***)
 Cancer-root. Beech woods. Ionia Co.(!); Flint; Macomb Co., etc. Very common in Grand-Saginaw Valley.

SCROPHULARIACEÆ.

(Figwort Family.)

VERBASCUM

- Common Mullein. 738. *Thapsus*, L. (***) L. P.
 Fields and road sides everywhere,—a common weed. Cultivated in England under the name of Aaron's Rod.
 Moth Mullein. 739. *Blattaria*, L.
 Road sides. S. Mich.; Ionia Co.(!); Detroit (!); Lansing (!), etc.

LINARIA

- Wild Toad-Flax. 740. *Canadensis*, Dumont.
 S. shore of Saginaw Bay—Winch. Cat.; Barrens, in Clare Co. (!). Infrequent or wanting in C. and S. Mich.
 Toad-Flax, Butter and Eggs. 741. *vulgaris*, Mill. (***)
 Road sides. Spreading from cultivation, but not yet a troublesome weed.

COLLINSIA

- Innocence. 742. *verna*, Nutt. C. & S.
 Collinsia. A beautiful little annual with blue and white flowers; worthy of cultivation. Moist woods. Ann Arbor—Winch. Cat.; S. W.—Wright's Cat.; Ionia Co.(!), and probably reaches its N. limits in Gratiot Co.(!)
 743. *parviflora*, Dougl. U. P.
 "Shady, moist ground, Upper Michigan."—Gray Fl. N. A.

SCROPHULARIA

- Figwort. 744. *nodosa*, L. (***) C. & S.
 "Simpson's Honey Plant." Rich soil. A valuable honey plant. Frequent.

CHELONE

- Snake Head. 745. *glabra*, L. (***) Th.
 Turtle Head. Borders of streams. Frequent.
 Balmoney.

PENTSTEMON

- Beard-tongue. 746. *pubescens*, Solander. C. & S.
 Dry soil. Ann Arbor—Winch. Cat.; Ionia Co.(!); Flint; Macomb Co. Common.
 Beard-tongue. 747. *lævigatus*, Solander, var. *Digitalis*, Gr. (?)
 May occur in the S.

MIMULUS

- Monkey-flower. 748. *ringens*, L. Th.
 Wet places. Common.
 Monkey-flower. 749. *alatus*, Solander.
 S. W.—Wright Cat.
 Monkey-flower. 750. *Jamesii*, Torr. & Gray.
 Abundant at Mackinac—Winch. Cat.; "Upper Michigan."—Gray. This species reaches its S. limits (?) in Ionia Co.(!), where it is rarely found growing near cool springs.

GRATIOLA

- HedgeHyssop. 751. *Virginiana*, L. (?)
 S. Mich.—Winch. Cat.

ILYSANTHES

- False Pimpernel. 752. *gratioloides*, Benth. C. & S.
Low grounds. Frequent.

LIMOSELLA

- Mudwort. 753. *aquatica*, L., var. *tenuifolia*, Hoffmann.
Dr. A. B. Lyons.

SYNTHYRIS

- Synthyris. 754. *Houghtoniana*, Benth.
Oak barrens. S. Mich.—Wright's Cat.; Ionia Co.(1), three miles S. of
Saranac. Probably reaches here its N. limits. Rare.

VERONICA

- Culver's Physic. 755. *Virginica*, L. (*) C. & S.
Rich woods. Furnishes the officinal *Leptandrin*. Common.
- Water Speedwell. 756. *Anagallis*, L. C. & S.
Ditches. Frequent.
- American Brooklime. 757. *Americana*, Schweinitz. (***) Th.
Brooks. Common.
- Marsh Speedwell. 758. *scutellata*, L. Th.
Swamps. Frequent.
- Common Speedwell. 759. *officinalis*, L. (***) S.
Dry hills. Ann Arbor—Winch. Cat. Scarce.
- Alpine Speedwell. 760. *alpina*, L. U. P.
Winchell Cat.
- Thyme-leaved Speedwell. 761. *serpyllifolia*, L. Th.
Open grounds. Frequent.
- Purslane Speedwell. 762. *peregrina*, L. Th.
Moist grounds everywhere. Common.
- Corn Speedwell. 763. *arvensis*, L. C. & S.
Cultivated and waste grounds. Common.
- Neckweed. 764. *agrestis*, L.
Sandy fields. Coleman Cat.; and Flint. Rare.
765. *Buxbaumii*, Tenore.
Waste grounds. Coleman Cat.

BUCHNERA

- Blue-hearts. 766. *Americana*, L. C. & S.
Moist sandy ground. S. W.—Wright Cat.; Flint; Coleman Cat. Infrequent.

GERARDIA

- Lousewort Foxglove. 767. *pedicularia*, L. L. P.
Woods. Frequent.
- Downy Foxglove. 768. *flava*, L. C. & S.
Open woods. Frequent.
- Smooth Foxglove. 769. *quercifolia*, Pursh. C. & S.
Oak woods. Frequent.
- Gerardia. 770. *auriculata*, Michx. S.
Wright Cat.
- Gerardia. 771. *laevigata*, Raf. S.
Coleman Cat.; Flint; Dr. Lyons.
- Purple Gerardia. 772. *aspera*, Douglas. C., N. & U. P.
Low ground. Ionia Co. (1); Montcalm Co.(1); Sitting Rabbit—Winch. Cat.
This species probably reaches its E. limits in Ionia Co.

- Purple Gerardia. 773. *purpurea*, L. L. P.
 Moist, sandy ground near the Great Lakes.
774. *purpurea*, L., var. *paupercula*, Gr.
 Oakland Co. (!)
- Slender Gerardia. 775. *tenuifolia*, Vahl.
 Ann Arbor—Winch. Cat.
- Slender Gerardia. 776. *tenuifolia*, Vahl., var. *asperula*, Gr.
 See Bot. Gazette, vol. 4, no. 5.

CASTILLEIA

- Scarlet Painted-cup. 777. *coccinea*, Spreng. Th.
 Wet and dry grounds. Varies in color of bracts from scarlet to yellow.
 Common.
778. *pallida*, Kunth, var. *septrionalis*, Gray.
 Lake Superior—Gray.

EUPHRASIA

- Eyebright. 779. *officinalis*, L. (***) U. P.
 "Shore of Lake Superior."—Gray; Isle Royale.—Whitney Cat.

PEDICULARIS

- Lousewort. 780. *Canadensis*, L. Th.
 Moist banks and woodlands. Common.
- Lousewort. 781. *lanceolata*, Michx. C. & S.
 Swamps. Frequent.

RHINANTHUS

- Yellow Rattle. 782. *Crista-galli*, L. U. P.
 "Lake Superior."—Gray, Fl. N. A.

MELAMPYRUM

- Cow-Wheat. 783. *Americanum*, Michx. Th.
 Sandy woods. Common.

ACANTHACEÆ.

(*Acanthus* Family.)

RUELLIA

- Ruellia. 784. *ciliosa*, Pursh. S.
 Dry grounds. Wright Cat.!
- Ruellia. 785. *strepens*, L. S.
 Dry soil. Wright Cat.

DIANTHERA

- Water Willow. 786. *Americana*, L. S.
 In shallow water. Ann Arbor—Winch. Cat.; Put-in-Bay (!); S. Haven—Bailey.

VERBENACEÆ.

(*Verbena* Family.)

PHRYMA

- Lopseed. 787. *Leptostachya*, L. C. & S.
 Moist woods. Pt. au Chene—Winch. Cat.; Flint; Macomb Co.; S. Mich.—Wright Cat.; Ionia Co. (!)
 Infrequent.

VERBENA

- White Vervain. 788. *urticifolia*, L. (***) Th.
Waste places. Common.
- Narrow Leaved Vervain. 789. *angustifolia*, Michx. S.
Dry grounds. Winch. Cat.
- Blue Vervain. 790. *hastata*, L. (***) Th.
Roadsides. Common.
791. *bracteosa*, Michx.
Waste places. Coleman Cat.; Kalamazoo—Bailey.

LIPPIA

- Frog-Fruit. 792. *lanceolata*, Michx. (?)
Coleman Cat.

LABIATÆ.

(Mint Family.)

TEUCRIUM

- Germander. 793. *Canadense*, L. (***) C. & S.
Wood Sage. Low grounds. Common.

COLLINSONIA

- Horse-weed. 794. *Canadensis*, L. C. & S.
Stone-root. Rich woods. Ionia Co.(!); Flint; Detroit; Ann Arbor; and S. W.—Winch.
Rich-weed. Cat. Frequent.

MENTHA

- Spearmint. 795. *viridis*, L. (*) Frequent.
Roadsides. Escaped from cultivation.
- Peppermint. 796. *piperita*, L. (*) Th.
Along streams. Extensively cultivated in St. Joseph and Wayne counties for the oil. Michigan produces about two-fifths of the world's crop. St. Joseph county leads in production, followed by Wayne county, and then by Wayne county, N. Y., which is the only other locality in the United States where peppermint is grown to great extent. The annual production in Michigan varies greatly, ranging from 20,000 to 60,000 pounds of oil. Some growers estimate the yield, in exceptionally favorable years, as high as 75,000 pounds. In severe seasons the plants are very apt to winter kill.—T. F. Wood, *et al.* Common.
- Horse-mint. 797. *Canadensis*, L. Th.
Low grounds. Common.

LYCOPUS

- Bugle-weed. 798. *Virginicus*, L. (**) Th.
Low grounds. Common.
- Water Horehound. 799. *sinuatus*, Ell. Th.
Frequent.
- Water Horehound. 800. *rubellus*, Mœnch. (***)
Clinton Co.(!) Infrequent.

HYSSOPUS

- Hyssop. 801. *officinalis*, L. (***)
Escaped from gardens. Flint; S. W.—Winch. Cat.

PYCNANTHEMUM

- Basil. 802. *lanceolatum*, Pursh. C. & S.
Low grounds. Ionia Co. (!); Flint; Macomb Co.; and southward. Frequent.
- Basil. 803. *linifolium*, Pursh. S.
Ann Arbor—Winch. Cat.

THYMUS

- Creeping Thyme. 804. *Serpyllum*, L. (***)
Flint; Coleman Cat. Scarcely escaped from gardens.

CALAMINTHA

- Calaminth. 805. *Nuttallii*, Benth.
Drummond's Island, and northward, common. Not seen in C. of the State; S. E.—Wright Cat.
- Basil. 806. *Clinopodium*, Benth.
Fields. Ionia Co. (!); Fort Gratiot.—Winch. Cat.; and northward to Lake Superior.

HEDEOMA

- American Pennyroyal. 807. *pulegioides*, Pers. (*) C. & S.
Fields. Hubbardston (!); S. Mich.—Wright Cat; Macomb Co. Scarce.

MONARDA

- Bee-Balm. Oswego Tea. 808. *didyma*, L. (***)
Rare in Michigan, only reported from one locality: Fort Gratiot—Winch. Cat.
- Wild Bergamot. 809. *fistulosa*, L. (***) Th.
Sandy soil. An extract of this aromatic plant has lately been introduced as a "sure cure" of malarial fever. The flowers are sometimes pure white, in which case the albinism extends to the stems also, which are green instead of the usual reddish-brown or purple. Common.
- Horse-mint. 810. *punctata*, L. (*) S.
Sandy soil. S. Mich.—Wright Cat.; S. Haven—Bailey. Infrequent.

BLEPHILIA

- Blephilia. 811. *ciliata*, Raf. L. P.
Dry ground. Ionia Co. (!); Ann Arbor, and Sault Ste. Marie—Winch. Cat. Scarce.
- Blephilia. 812. *hirsuta*, Benth. C. & S.
Low woods. Ionia Co. (!), where it is frequent; S. Mich.—Wright Cat.

LOPHANTHUS

- Giant Hyssop. 813. *nepetoides*, Benth. C. & S.
Low grounds. Ionia Co. (!); Flint; Lansing (!); S. W.—Wright Cat; Grosse Isle—Miss Clark. Infrequent.
- Giant Hyssop. 814. *scrophulariæfolius*, Benth. C. & S.
Low grounds. S. Mich.—Wright Cat.; Macomb Co. Infrequent.

NEPETA

- Catnip. 815. *Cataria*, L. (*) Th.
Cat-mint. Near dwellings. An excellent honey plant. Common.
- Ground Ivy. Gill. 816. *Glechoma*, Benth. (***) C. & S.
Sparingly escaped from culture. Flint; Grand Rapids—Coleman Cat.

DRACOCEPHALUM

- Dragon-head. 817. *parviflorum*, Nutt.
This interesting plant was first detected in the Lower Peninsula in June, 1876, when it was found in Roscommon Co., a little south of Houghton Lake. Its range is northward to Lake Superior.—Gray.

SCUTELLARIA

- Mad-dog Skullcap. 818. *lateriflora*, L. (*) Th.
Low grounds. Gathered to considerable extent for the drug trade. Common.
- Skullcap. 819. *versicolor*, Nutt. S.
Banks of streams. S. Mich.—Wright Cat.
- Skullcap. 820. *canescens*, Nutt. (?) S.
Coleman Cat., etc.

- Skullcap. 821. *pilosa*, Michx. S. W.
S. W.—Winch. Cat.; Gray, Fl. N. A.
- Skullcap. 822. *parvula*, Michx. Infrequent.
Ionia (!). Th.
- Skullcap. 823. *galericulata*, L. (**)
Low grounds. Common.

BRUNELLA

- Self-heal, or 824. *vulgaris*, L. (***) Th.
Heal-all. Fields. Occasionally the flowers are white. Common.

PHYSOSTEGIA

- False Dragon 825. *Virginiana*, Benth. C. & S.
Head. Wet grounds; cultivated in gardens; varies greatly. Ann Arbor—Winch.
Cat.; S. W.—Wright Cat.; Muir (!); Kalamazoo—Bailey. Occasional.

MARRUBIUM

- Horehound. 826. *vulgare*, L. (*)
Roadsides escaped from cult. Ionia Co. (!); Flint; S. Mich.—Winch.
Cat. Frequent.

LEONURUS

- Motherwort. 827. *Cardiaca*, L. (***) L. P.
Waste grounds. Much visited by bees for its honey. Common.

LAMIUM

- Dead-Nettle. 828. *amplexicaule*, L. (***)
Ionia (!), common.

GALEOPSIS

- Hemp Nettle. 829. *Tetralix*, L. (***) Th.
Rare in C. of the State. Abundant at Mackinac—Winch. Cat.
- Red Hemp 830. *Ludanum*, L.
Nettle. Ft. Gratiot and Sault Ste. Marie—Winch. Cat.

STACHYS

- Hedge Nettle. 831. *aspera* Michx. S.
Wet grounds. Frequent.
- Hedge Nettle. 832. *hyssopifolia*, Michx. Th.
Wet grounds. S. Mich.—Wright Cat.

BORRAGINACEÆ.

(Borraga Family.)

CYNOGLOSSUM

- Hounds- 833. *officinale*, L. (***) Th.
tongue. Roadsides. Frequent.
- Wild Com- 834. *Virginicum*, L. Th.
frey. Open Woods. Frequent.

ECHINOSPERMUM

- Beggars' Lice. 835. *Virginicum*, Lehm. Th.
Woods. Frequent.
- Stick-seed. 836. *Lappula*, Lehm. L. P.
A worthless weed along roadsides and in waste places.

MERTENSIA

- Smooth Lung-wort. 837. *Virginica*, DC. (***)
Common in gardens. Coleman Cat.; Lyons.
838. *paniculata*, Don. U. P.
Whitney Cat.; Gray, Fl. N. A.

MYOSOTIS

- Forget-me-not. 839. *verna*, Nutt.
Winch. Cat.; Coleman Cat., etc.

LITHOSPERMUM

- Wheat Thief. Red-root. Corn Grom-well. 840. *arvense*, L. C. & S.
In wheat fields. A bad weed which is being rapidly distributed by threshing machines. Farmers should be on their guard. It may be known by its branching stems, narrow, rough leaves, small white flowers, and gray, bony seeds.
- Common Grom-well. 841. *officinale*, L. (***) Th.
Roadsides. Infrequent.
- Broad-leaved Grom-well. 842. *latifolium*, Michx. C. & S.
Borders of woods. S. Mich.—Winch. Cat.; Ionia Co.(!); Flint, etc. Frequent.
- Hoary Puccoon. 843. *canescens*, Lehm. Th.
Sandy fields. Ann Arbor.—Winch. Cat.; Ionia Co.(!); Macomb Co.
- Hairy Puccoon. 844. *hirtum*, Lehm. Th.
Light sand. Flowers bright yellow, showy. Frequent.
845. *angustifolium*, Michx. (?)
Credited to the State by Dr. A. B. Lyons, and may be looked for in the extreme S. W.

ONOSMODIUM

- False Grom-well. 846. *Carolinianum*, DC.
Only noticed by Dr. D. Cooley, Macomb Co.

SYMPHYTUM

- Comfrey. 847. *officinale*, L. (***)
Escaped from gardens. Infrequent.

BORRAGO

- Borrage. 848. *officinalis*, L.
Adv. on Agricultural College grounds, Lansing. A honey plant.

HYDROPHYLLACEÆ.

(Waterleaf Family.)

HYDROPHYLLUM

- Waterleaf. 849. *Virginicum*, L. C. & S.
Rich woods. Frequent.
- Waterleaf. 850. *Canadense*, L. C. & S.
Damp rich woods. Frequent.
- Hairy Water-leaf. 851. *appendiculatum*, Michx. C. & S.
Moist hillsides and rich woods. Frequent.

PHACELIA

852. *Franklinii*, Gray.
"Shores of L. Superior, especially on Isle Royale."—Gray; and Dr. A. B. Lyons.

POLEMONIACEÆ.

(Phlox Family.)

PHLOX

- | | | |
|----------------------|--|---------|
| Hairy Phlox. | 853. pilosa, L. | C. & S. |
| | Dry, sandy fields. Flowers bright rose, or rarely pure white. Deserves a place in the garden. Ann Arbor—Winch. Cat.; Ionia Co.(!); Flint; Macomb Co., etc. | |
| Divaricate Phlox. | 854. divaricata, L. | C. & S. |
| | Woods and fields. | Common. |
| Ground or Moss Pink. | 855. subulata, L. | |
| | S. Mich.—Winch. Cat. Common in cultivation. | |

CONVOLVULACEÆ.

(Convolvulus Family.)

IPOMEA

- | | | |
|--|-------------------------------------|---------|
| Wild Potato-vine. Man-of-the-Earth. | 856. pandurata, Meyer. (***) | C. & S. |
| | Ann Arbor—Winch. Cat.; Coleman Cat. | |

CONVOLVULUS

- | | | |
|------------------|-----------------------------|-------------|
| Low Bind-weed. | 857. spithameus, L. | Th. |
| | Sandy fields. | Infrequent. |
| Hedge Bind-weed. | 858. sepium, L. | Th. |
| | Low grounds. Very variable. | Common. |

CUSCUTA

- | | | |
|---------|--|-----------|
| Dodder. | 859. chlorocarpa, Engelmann. | S. W. |
| | S. Haven—Mrs. Millington. | |
| Dodder. | 860. Gronovii, Willd. | C. & S. |
| | Low grounds. | Frequent. |
| Dodder. | 861. glomerata, Choisy. (?) | |
| | "Wet prairies, Ohio to Wisconsin."—Gray. | |
| Dodder. | 862. tenuiflora, Engelm. | C. & S. |
| | Maple River valley(!); Coleman Cat. | |

SOLANACEÆ.

SOLANUM

- | | | |
|--------------------------------|---------------------------|-------------|
| Common Nightshade. Black N. | 863. nigrum, L. (***) | C. & S. |
| | Moist, cultivated fields. | Common. |
| Bittersweet. | 864. Dulcamara, L. (*) | C. & S. |
| | Roadsides. | Infrequent. |

PHYSALIS

- | | | |
|----------------|--|------------|
| Ground Cherry. | 865. grandiflora, Hook. | N. & U. P. |
| | "Clearings." First collected in L. P., near Farwell, in June, 1876, where it seemed to be at home. Near the mouth of the Au Sable river, Iosco Co., June, '78.—C. B. Cochran. "S. shore of L. Superior."—Gray, Synopt. Fl. N. A. | |
| Ground Cherry. | 866. Philadelphica, Lam. | |
| | Grand Rapids—Coleman Cat. | |
| Ground Cherry. | 867. Virginiana, Mill. (***) | Th. |
| | Light, sandy soil. | Common. |
| Ground Cherry. | 868. lanceolata, Michx. | C. & S. |
| | Sandy soil. Ionia Co. (!), etc. | Frequent. |

- Ground Cherry. 869. *pubescens*, L. (***) C. & S.
Common throughout the pine country. Ann Arbor—Winch. Cat.; Mont-
calm Co., etc.

NICANDRA

- Apple of Peru. 870. *physaloides*, Gærtn. (***)
Gardens. Ann Arbor—Winch. Cat.; Flint; Ionia Co. (!) Scarce.

LYCIUM

- Matrimony Vine. 871. *vulgare*, Dunal. (***)
Escaped from gardens in some places.

HYOSCYAMUS

- Henbane. 872. *niger*, L. (*)
Macomb Co.; Ft. Gratiot; Mackinac, abundant—Winch. Cat.

DATURA

- Common Stra- 873. *Stramonium*, L. (*) C. & S.
monium, or Frequent.
Thornapple. Roadsides.
Jamestown
Weed. 874. *Tatula*, L. (***) C. & S.
Purple Thorn- Rare.
apple. Flint; Macomb Co.
P. *Stramoni-*
um.

NICOTIANA

- Wild Tobacco. 875. *rustica*, L. (***)
Emmet Co., cultivated by the Indians—Winch. Cat.

GENTIANACEÆ.

(Gentian Family.)

ERYTHRÆA

- Centaurry. 876. *Centaurium*, Pers. Adv. and rare.
Lansing—Bailey.

SABBATIA

- American 877. *angularis*, Pursh. S.
Centaurry. Marshes. Cass Co.—Univ. Herb., Houghton Survey Coll., 1833; Goguac
Lake, near Battle Creek, 1879—Prof. V. M. Spalding; S. Mich.—Wr.
Cat. Rare.

GENTIANA

- Fringed Gen- 878. *crinita*, Froel. Th.
tian. Blue Low grounds. Ann Arbor—Winch. Cat.; Lansing and So. Haven—Bailey;
Gentian. Mackinac—Whitney; Ionia Co. (!), etc. Common.
Smaller 879. *serrata*, Gunner. Th.
Fringed With the last. Frequent.
Gentian. 880. *quinqueflora*, Lam. (***) Th.
Five-flowered Moist hillsides. Ann Arbor—Winch. Cat.; Ionia Co. (!) Occasional.
Gentian. 881. *quinqueflora*, Lam., var. *occidentalis*, Gray.
Five-flowered Ann Arbor—Winch. Cat.
Gentian. 882. *puberula*, Michx. (**) S.
Blue Gentian. Barrens. Ann Arbor—Miss Clark, Miss Allmendinger. Rare.
883. *Saponaria*, L. (***) S.
Soapwort Moist woods. Macomb Co.; S. Mich.—Wright Cat. Infrequent.
Gentian. 884. *Andrewsii*, Griesb. (***) C. & S.
Closed Gen- River banks. Frequent.
tian.

- Whitish Gen- 885. *alba*, Muhl. Th.
tian. Low meadows and borders of woods. Ionia Co. (!); Clinton Co. (!); Ann Arbor and S. W.—Winch. Cat.; to L. Superior. Rare or local.
886. *linearis*, Fröel., var. *lanceolata*, Gr. N. & U. P.
Pt. au Chene, L. Mich.—Winch. Cat. "Minnesota and along L. Superior."
—Gray.

FRASERA

- American 887. *Carolinensis*, Walt. (**) C. & S.
Columbo. Rich, dry soil. Jackson Co. and westward—Winch. Cat.; Ann Arbor—
Miss Clark; Grand Rapids (!); Macomb Co. Scarce.

HALENIA

- Spurred 888. *deflexa*, Griesb. N. & U. P.
Gentian. Shore of Little Traverse Bay, near Harbor Point (!); Drummond's Is. and
St. Helen's Is.—Winch. Cat.; northward to L. Superior. Frequent.

BARTONIA

- Bartonia. 889. *tenella*, Muhl.
Screw-stem. Open woods. S. Mich.—Wright Cat.; Hubbardston (!); Flint. Rare.

MENYANTHES

- Buckbean. 890. *trifoliata*, L. (***) Th.
Bogs. Common.

APOCYNACEÆ.

(Dog-bane Family.)

APOCYNUM

- Spreading 891. *androsæmifolium*, L. (**) Th.
Dogbane. Borders of woods. Common.
- Indian Hemp. 892. *cannabinum*, L. (**) Th.
Low grounds. Exceedingly variable in size, habit, shape of leaves, pubescence, etc. De Candolle's varieties *glaberrimum* and *pubescens* occur, but also intermediate forms, rendering useless any sub-specific names. Common.

ASCLEPIADACEÆ.

(Milkweed Family.)

ASCLEPIAS

- Butterfly- 893. *tuberosa*, L. (**) Th.
weed. Sandy soil. Ranges from Canada to Florida, and from the Saskatchewan
Pleurisy-root. Valley to Texas. Occasionally cultivated for its showy orange-red
flowers. Roots exported. Common.
- Purple Milk- 894. *purpurascens*, L. C. & S.
weed. Woods. Ann Arbor.—Winch. Cat.; Ionia Co. (!); Clinton Co. (!); Flint; Ma-
comb Co. Frequent.
- Indian Hemp. 895. *incarnata*, L. (**) Th.
Swamp Milk- Banks of streams. Common.
weed.
- Milkweed. 896. *Cornuti*, Decaisne. (**) Th.
Silkweed. Fields. The young shoots eaten for greens. Common.
- Poke Milk- 897. *phytolaccoides*, Pursh. (***) C. & S.
weed. Moist grounds. Ann Arbor; Ft. Gratiot.—Winch. Cat.; Ionia Co. (!);
Lansing (!); Flint; Macomb Co. Infrequent.
- Four-leaved 898. *quadrifolia*, L. (?) Th.
Milkweed. Ann Arbor.—Winch. Cat.
- Whorled 899. *verticillata*, L. (***) S.
Milkweed. Barrens. S. Mich.—Wright Cat. Infrequent.

ACERATES

Green Milk-weed.

900. *viridiflora*, Ell.

Ft. Gratiot.—Winch. Cat.; S. W.—Wright Cat.

C. & S.

Rare.

OLEACEÆ.

(*Olive Family.*)

FRAXINUS

White Ash.

901. *Americana*, L.

Th.

Not frequent enough N. and in U. P. to be of economic importance. Moist woods. A valuable timber tree of medium size, which on account of the toughness, elasticity, and beauty its wood is much used for cabinet making, wainscoting, carriage making, handles of scythes, rakes, etc., etc. Ought to be planted oftener for shade and ornament. Common.

Red Ash.

902. *pubescens*, Lam.

Th.

Low grounds. A small tree, seldom noticed. Ionia Co. (!); Lansing (!) S. Mich.—Wright Cat.; Drummond's L.—Winch. Cat. Scarce.

Green Ash.

903. *viridis*, Michx. f.

C. & S.

Ann Arbor.—Winch. Cat.

Rare.

Blue Ash.

904. *quadrangulata*, Michx.

Th.

Rich woods. "Large timber tree, the inner bark yielding a blue color to water."—Gray, Fl. N. A. This tree is frequently confounded with White Ash, from which it may easily be distinguished by its square branchlets. Wood valuable. Frequent.

Black Ash.

905. *sambucifolia*, Lam.

Th.

A common tree in swamps; less valuable than white ash. Wood used for hoops, basket work, etc. Also beginning to be used for inside finishing in houses—doors, cabinets, etc. Black ash doors with hard maple panels, finished in oil, are said to present a very pleasing appearance, and to be both inexpensive and durable. Common.

ARISTOLOCHIACEÆ.

(*Birthwort Family.*)

ARISTOLOCHIA

Virginia Snake-root.

906. *Serpentaria*, L. (?)

Said to occur in the S. part of the State.

ASARUM

Asarabacca.
Poke. Scoke.
Coltsfoot.907. *Canadense*, L. (**)

Th.

Moist woods.

Common.

PHYTOLACCACEÆ.

(*Poke-weed Family.*)

PHYTOLACCA

Garget.
Poke. Scoke.
Pigeon Berry.908. *decandra*, L. (**)

C. & S.

Fields. The young shoots in spring may be eaten like asparagus.

Frequent.

CHENOPODIACEÆ.

(*Goosefoot Family.*)

CHENOPODIUM

Lamb's Quar-
ters.
Pigweed.
Oak-leaved
Goosefoot.909. *album*, L.

Th.

Waste and cultivated ground.

Common.

910. *glaucum*, L.

Lansing, College grounds.

911. *urbicum*, L., var. *rhombofolium*, Moquin. S.
Waste grounds. Ionia Co. (!); Flint; Grand Rapids—Coleman Cat.
Infrequent.
- Maple-leaved 912. *hybridum*, L. Th.
Goosefoot. Waste grounds. Common.
913. *murale*, L. Rare.
Grand Rapids—Coleman Cat. C. & S.
- Jerusalem 914. *Botrys*, L. (***)
Oak. Escaped from gardens. Abundant in places.
- Feather Ge- 915. *ambrosioides*, L. (***) S.
ranium. Waste places. Macomb Co.; Ann Arbor—Miss Clark; S. W.—Wright Cat.
Mexican Tea. Scarce.

BLITUM

- Strawberry 916. *capitatum*, L. Th.
Blite. Dry, rich grounds. Very noticeable from the fleshy, bright-red calyx.
Common.
- Good King 917. *Bonus Henricus*, Reich.
Henry. Flint. Scarce.

ATRIPLEX

918. *patula*, L., var. *hastata*, Gr.
Common at Detroit.—Dr. A. B. Lyons.

CORISPERMUM

- Bug-seed. 919. *hyssopifolium*, L.
S. Haven—Bailey; and northward to L. Superior, along the shores of the
Great Lakes.

AMARANTACEÆ.

(Amaranth Family.)

AMARANTHUS

- Prince's 920. *hypochondriacus*, L. (***)
Feather. Scarcely escaped from gardens. Ann Arbor—Miss Clark.
- Pigweed. 921. *retroflexus*, L. L. P.
Red-root. A common weed in gardens. Common.
- Green Ama- 922. *albus*, L. L. P.
ranth. Fields and gardens, less troublesome than the preceding species.
Frequent.
- Tumble weed
White Ama-
ranth.

ACNIDA

- Acnida. 923. *tuberculata*, Moquin-Tandon. C. & S.
Swamp Ama-
ranth. Low grounds. S. Mich.—Winch. Cat.; Ionia Co. (!); Lansing (!); Macomb
Co. Frequent.

POLYGONACEÆ.

(Buckwheat Family.)

POLYGONUM

- Alpine Bis- 924. *viviparum*, L. (***) U. P.
tort. Shore of L. Superior—Gray; Isle Royale, common.—Whitney Cat.
- Prince's 925. *orientale*, L.
Feather. Sparingly escaped from gardens.
926. *Careyi*, Olney. (?)
Grand Rapids.—Coleman Cat.
927. *Pennsylvanicum*, L. C. & S.
Low grounds. Ionia Co. (!); Clinton Co. (!); Flint; S. Mich.—Wright Cat.
Frequent.

928. *incarnatum*, Ell. C. & S.
River banks. Ionia Co.(!); Grand Rapids—Coleman Cat. Frequent.
929. *lapithifolium*, Ait. U. P.
L. Superior—O. B. Wheeler.
- Lady's 930. *Persicaria*, L. (***) Th.
Thumb. Waste places. Common.
- Common 931. *Hydropiper*, L. (***) Th.
Smartweed, or Water-pepper. Moist grounds. Common.
- Water Smart- 932. *acre*, HBK. (***) L. P.
weed. Wet places. Ann Arbor; Ionia Co.(!); Mackinac—Winch. Cat.; Flint. Frequent.
- Mild Water- 933. *hydropiperoides*, Michx. (***) C. & S.
pepper. Wet places. Common.
- Water 934. *amphibium*, L., var. *aquaticum*, Willd. Th.
Persicaria. Borders of ponds. Frequent.
- Water 935. *amphibium*, L., var. *terrestre*, Willd. C.
Persicaria. E. shore L. Huron.—J. Macoun; Ionia Co.(!); Flint; Grand Rapids.
936. *Hartwrightii*, Gray.
Kalamazoo—Tuthill.
937. *Virginianum*, L. C. & S.
Thickets. Common.
- Joint-weed. 938. *articulatum*, L. N. & U. P.
Traverse City—Winch. Cat.; L. Superior—Whitney Cat.
- Door-weed. 939. *aviculare*, L. (***) Th.
Knotgrass. The commonest of weeds.
- Goose-grass. 940. *erectum*, L. Common.
Erect knot- Waste places with the preceding species.
- grass. 941. *ramosissimum*, Michx. Th.
Banks of streams. Infrequent.
- Slender Knot- 942. *tenuis*, Michx. C. & S.
grass. Sterile soil. S. Mich.—Wright Cat.; common in Ionia Co.(!); Macomb Co.
- Halberd- 943. *arifolium*, L. L. P.
leaved Tear- Low grounds. South Haven—Bailey; Gros Cap, L. Mich.—Winch. Cat.; S. Infrequent.
thumb. Mich.—Wright Cat.
- Arrow-leaved 944. *sagittatum*, L. Th.
Tear-thumb. Low grounds. Frequent.
- Black Bind- 945. *Convolvulus*, L. C. & S.
weed. Waste grounds. S. W.—Wright Cat.; Flint; Macomb Co. Infrequent.
946. *cilinode*, Mx. Th.
Copses. S. Haven—Bailey; Lyons, and northward. Common.
- Climbing 947. *dumetorum*, L. Th.
False Buck- Moist thickets. Common.
wheat.

FAGOPYRUM

- Buckwheat. 948. *esculentum*, Mœnch.
Persistent in fields.

RUMEX

- Great Water 949. *orbiculatus*, Gray. Th.
dock. Wet places. S. Mich.—Winch. Cat.; Ionia Co.(!); Flint; Macomb Co.; and Frequent.
northward.
- Pale Dock. 950. *Britannica*, L. (***)
Sault Ste. Marie.—Winch. Cat.; and southward. Rare.

| | | |
|---------------------------|---|------------|
| White Dock. | 951. <i>salicifolius</i> , Weinmann. | N. & U. P. |
| | Shore of Little Traverse Bay(!); and northward. | Scarce. |
| Swamp Dock. | 952. <i>verticillatus</i> , L. | L. P. |
| | Wet swamps. | Frequent. |
| Curled Dock. Yellow D. | 953. <i>crispus</i> , L. (**) | Th. |
| | Everywhere in fields. A bad weed. | |
| Bitter Dock. | 954. <i>obtusifolius</i> , L. (***) | Th. |
| | Meadows and fields. | Frequent. |
| Bloody-veined Dock. | 955. <i>sanguineus</i> , L. (***) | |
| | Ann Arbor—Miss Clark. | |
| Field or Sheep Sorrel. | 956. <i>Acetosella</i> , L. (***) | Th. |
| | Sterile fields. | Common. |

LAURACEÆ.

(Laurel Family.)

SASSAFRAS

| | | |
|------------|--|-----------|
| Sassafras. | 957. <i>officinale</i> , Nees. (*) | C. & S. |
| | Woods—sandy soil. A shrub or low tree, not found north of the C. of the State. | Frequent. |

LINDERA

| | | |
|-----------------------------------|--------------------------------------|-----------|
| Spice-bush. Benjamin- bush. | 958. <i>Benzoin</i> , Meisner. (***) | C. & S. |
| | Damp woods. | Frequent. |

THYMELEACEÆ.

(Mezereum Family.)

DIRCA

| | | |
|------------------------------|--|-----------|
| Leather-wood. Moose-wood. | 959. <i>palustris</i> , L. (***) | Th. |
| | Woods. The tough bark used for thongs by Indians. Ann Arbor—Winch. Cat.; S. Haven—Bailey; and northward. | Frequent. |

ELÆAGNACEÆ.

(Oleaster Family.)

SHEPHERDIA

| | | |
|-------------------------|---|-----|
| Canadian Shepherdia. | 960. <i>Canadensis</i> , Nutt. | Th. |
| | Gravelly banks. Lansing—Prof. W. J. Beal; "On the western islands in Lake Erie."—Dr. D. Cooley; Ann Arbor—Winch. Cat.; South Haven—Bailey; Flint; and northward. Abundant at Petoskey(!). "A common short shrub," (L. Superior.)—Whitney Cat. | |

SANTALACEÆ.

(Sandalwood Family.)

COMANDRA

| | | |
|------------------------|--|------------|
| Bastard Toad- flax. | 961. <i>umbellata</i> , Nutt. | Th. |
| | Dry ground. Indifferently parasitic on roots. | Common. |
| | 962. <i>livida</i> , Richards. | N. & U. P. |
| | "Sandy shores, L. Superior."—Gray; Traverse City—Dr. A. B. Lyons; Isle Royale—Whitney Cat. | |

SAURURACEÆ.

(Lizard's-tail Family.)

SAURURUS

- Lizard's-tail. 963. *cernuus*, L. (***)
Swamps.

C. & S.
Common.

CERATOPHYLLACEÆ.

(Hornwort Family.)

CERATOPHYLLUM

- Hornwort. 964. *demersum*, L.
Ponds. Fruit in August.

Th.
Common.

CALLITRICHACEÆ.

(Water-Starwort Family.)

CALLITRICHE

- Water-Starwort. 965. *verna*, L. (***)
Ponds. Macomb Co., to Lake Superior.
Water-Starwort. 966. *autumnalis*, L.
Rivers. Flint—Dr. Daniel Clark; to Lake Superior—Gray.

Th.

PODOSTEMACEÆ.

(River-weed Family.)

PODOSTEMON

- River-weed. 967. *ceratophyllus*, Michx.
Dr. A. B. Lyons.

EUPHORBIACEÆ.

(Spurge Family.)

EUPHORBIA

- Shore Spurge. 968. *polygonifolia*, L.
Sandy shores of the Great Lakes. S. Haven—Bailey; Ft. Gratiot—Winch. Cat., etc. Frequent.
Spotted Spurge. 969. *maculata*, L. (***)
Roadsides and fields, everywhere. One of the few northern plants, observed by Prof. A. N. Prentiss in Brazil.
970. *hypericifolia*, L. (***)
Cultivated soil, and waste places. Detroit—Dr. A. B. Lyons; Ionia (!); Grand Rapids (!); Lansing—Bailey. Infrequent.
Flowering Spurge. 971. *corollata*, L. (*)
Sandy soil. A weed difficult to eradicate on account of its deep roots. Beginning to be cultivated by gardeners for its abundant, small, white flowers. Its milky juice is acrid-poisonous.
972. *platyphylla*, L.
Macomb Co.; "Along the Great Lakes."—Gray.
973. *Helioscopia*, L. (***)
Common at Detroit.—Dr. A. B. Lyons.
974. *commutata*, Engelm.
Ann Arbor.—Winch. Cat.; Flint.

Th.

C. & S.

C. & S.

- Garden Spurge. Door-yard S. 975. *Cyparissias*, L. (***)
Escaped from cultivation. Frequent.
976. *Esula*, L.
Escaped from cultivation. Infrequent.

ACALYPHA

- Three-seeded Mercury. 977. *Virginica*, L. Th.
Open woods. Variable. Ionia (!); Detroit (!), etc. Common.

EMPETRACEÆ.

(Crowberry Family.)

EMPETRUM

- Black Crowberry. 978. *nigrum*, L. U. P.
Whitney Cat.

URTICACEÆ.

(Nettle Family.)

ULMUS

- Slippery Elm. Red Elm. 979. *fulva*, Michx. (*) Th.
Rich soil. Wood reddish, tough and hard. The inner bark mucilaginous and much used in medicinal preparations. Frequent.
- White Elm. American Elm. 980. *Americana*, L. (***) Th.
Low grounds. Wood tough, fine grained, valuable, used for wagon hubs, etc. One of our finest ornamental trees. Common.
- Rock Elm. 981. *racemosa*, Thomas. Th.
River banks. Wood similar to the last but more valuable; takes a fine polish. A large, fine tree, frequently planted. Frequent.

CELTIS

- Hackberry. Sugarberry. Nettle-tree. 982. *occidentalis*, L. C. & S.
River banks. Sap wood, yellow, inner wood, grayish, coarse grained, soft and of little value, used for fuel. A medium or large sized tree. Frequent.

MORUS

- Red Mulberry. 983. *rubra*, L. (***) C. & S.
A small tree on river bottoms. Wood valuable. Wayne Co.; Ionia Co. (!); Lansing (!). The largest specimen observed grows near Ionia, and measures fourteen inches in diameter two feet above the ground. Frequent as far north as latitude 43°, where the abundant fruit ripens the last of June.

URTICA

- Tall Wild Nettle. 984. *gracilis*, Ait. Th.
Moist ground. Common.
- Great Stinging Nettle. 985. *dioica*, L. (***) Th.
Waste places. Occasional.

LAPORTEA

- Wood Nettle. Cursed Nettle. 986. *Canadensis*, Gaud. (***) C. & S.
Thick woods along streams. A vicious weed. Common.

PILEA

- Richweed. 987. *pumila*, Gray. C. & S.
Low woods. Common.

BØEHMERIA

- False Nettle. 988. *cylindrica*, Willd. C. & S.
Moist ground. Common.

PARIETARIA

- Pellitory. 989. *Pennsylvanica*, Muhl.
Grand Rapids—Coleman's Cat.

CANNABIS

- Hemp. 990. *sativa*, L. (*)
Waste places. L. P.
Frequent.

HUMULUS

- Common Hop. 991. *Lupulus*, L. (*)
Banks of streams. Th.
Frequent northward.

PLATANACEÆ.

(*Plane-tree Family.*)

PLATANUS

- Plane-tree. 992. *occidentalis*, L. C. & S.
Buttonwood.
Along our rivers. "The largest tree of the Atlantic forests."—Sargent.
Presents a striking appearance by reason of its mottled bark, which is
rarely more than one-sixteenth of an inch thick. Wood reddish, tough,
and unweedgeable; can be used in short sections for cabinet work, sew-
ing machines, tables, etc., but is very liable to warp. Frequent.

JUGLANDACEÆ.

(*Walnut Family.*)

JUGLANS

- Butternut. 993. *cinerea*, L. (*) C. & S.
Low, rich woods. A medium-sized tree, often planted. The wood is lighter
and softer than the next, but takes a fine polish—used in cabinet making
and in houses in inside finishing. Recommended, in connection with
lighter woods, for wainscotings, mouldings, etc., where black walnut
would have too glaring and pronounced an appearance; makes good
doors—not liable to warp. Common.
- Black Walnut. 994. *nigra*, L. (***) C. & S.
One of our most valuable timber-trees, and more used in cabinet-making
than any other. At its present rate of consumption, the black walnut
in Michigan will soon be a thing of the past. Frequent.

CARYA

- Shag-bark 995. *alba*, Nutt. (***) C. & S.
Hickory.
Timber very valuable; used wherever great durability, strength, and
elasticity are required. *C. microcarpa*, Nutt., occurs and seems to be
distinct. Common.
- Western Shell- 996. *sulcata*, Nutt. C. & S.
bark Hickory.
River bottoms. Ionia Co.(!), where it reaches its northern limits. Rare.
except in the extreme south.
- Mocker-nut. 997. *tomentosa*, Nutt. C. & S.
Dry woods. Flint; Grand Rapids—Coleman's Cat. Rare.
- Pignut. 998. *porcina*, Nutt. C. & S.
Woods. Nuts pear-shaped or oblong. Common.
- Bitternut. 999. *amara*, Nutt. C. & S.
Moist soil. No member of this family gets much north of lat. 43°. Common.

CUPULIFERÆ.

(Oak Family.)

QUERCUS

- White Oak. 1000. *alba*, L. (*) Th.
Rich woods. Rare in U. P., Menominee Co.—Burt MS. Cat.; etc. Our most valuable species. Much used in inside finishing, carriage-making, etc., etc., wherever a strong, durable, and beautiful timber is desired. Common.
- Bar Oak. 1001. *macrocarpa*, Michx. (***) C. & S.
Rich soil. Common.
- Swamp White Oak. 1002. *bicolor*, Willd. C. & S.
Low ground. A large tree. Scales of the involucre often bear galls which resemble abortive acorns. Common.
- Yellow Chestnut Oak. 1003. *Muhlenbergii*, Engelm. C. & S.
Rich woods. A medium sized tree. Common.
- Dwarf Chestnut Oak. 1004. *prinoides*, Willd. C. & S.
A low shrub or small tree. Macomb Co.; Hubbardston (!); Muir (!); Gratiot Co. (!). This and the preceding seem to run together. Infrequent.
- Laurel or Shingle Oak. 1005. *imbricaria*, Michx. S.
Barrens. Galesburg—H. Dale Adams; Ann Arbor—Winch. Cat.; S. Mich.—Dr. Wright. Rare.
- Black Jack Oak. 1006. *nigra*, L. (?) Th.
Said to occur in the extreme S. W.
- Scarlet Oak. 1007. *coccinea*, Wang. Th.
Inner bark reddish; scales of involucre, brown, glabrate, appressed. In the C. this species blossoms and puts forth its leaves about two weeks earlier than the next, and the leaves are smooth and glossy before the leaves of the next have become well divested of their reddish down. Frequent.
- Black Oak. 1008. *tinctoria*, Bartram. (*)
Yellow-barked Oak. Inner bark bright yellow; scales of involucre yellowish-canescant, somewhat squarrose; leaves less pinnatifid, more obovate in outline and less glossy-green than those of *Q. coccinea*. This species and the preceding occur together in the C. and are seldom large—usually 40-50 ft., and 12-15 inches in diameter. Considerable study has shown no gradations between the two forms, except one anomalous specimen, with very long acorns, and some characteristics of both species.
- Red Oak. 1009. *rubra*, L. (***) Th.
Wood reddish, coarse; used chiefly for fence rails and fuel. In the C. & S., a large tree; in the N. either a very large tree, (Emmet Co.—Winchell), or, at Petoskey, a low tree or tall shrub(!); in U. P., along the shore, a low shrub or scraggy tree (the common form), or, in Ontonagon valley, a good-sized tree—Whitney. *Q. ambigua*, Mx., apparently belongs here.—(See Engelm. "Oaks of the U. S." Tr. Ac. Sc., St. Louis, Vol. III.) "One of the most variable of the Atlantic species."—Engelmann.

CASTANEA

- Chestnut. 1010. *vulgaris*, var. *Americana*, A. DC. (***) S. E.
Occurs rarely in the S. E. Does well when planted, at least as far north as lat. 44°; Macomb Co.; Wayne Co.; Monroe Co.; Ann Arbor—Dr. Steere.

FAGUS

- Beech. 1011. *ferruginea*, Ait. Th.
Common in L. P., but rare in U. P. Occurs at Mackinac and Pictured Rocks.

CORYLUS

- Wild Hazel-nut. 1012. *Americana*, Walt. (***) Th.
Thickets. Common.

- Beaked Hazel. 1013. *rostrata*, Ait. (***)
Lansing—Bailey, probably its southern limit; Hubbardston(!); and common northward.

OSTRYA

- Hop-Hornbeam. 1014. *Virginica*, Willd. Th.
Iron-wood. Rich woods. Common.

CARPINUS

- Blue or Water Beech. 1015. *Americana*, Michx. Th. (?)
Along streams. Wood of this and the preceding tough and durable; used for wedges, levers, etc. Common.

MYRICACEÆ.

(*Sweet Gale Family.*)

MYRICA

- Sweet Gale. 1016. *Gale*, L. (***) N. & U. P.
Swamp near Crooked Lake, Emmet Co.(!); Manistee—E. J. Hill; Isle Royale—Dr. A. B. Lyons.
Bay-berry. 1017. *cerifera*, L. (***)
Wax-Myrtle. S. Mich.—Winch. Cat.

COMPTONIA

- Sweet Fern. 1018. *asplenifolia*, Ait. (***) Th.
South—Wr. Cat.; Detroit—Dr. A. B. Lyons. Very common in the center of the State and northward throughout the pine country, of which it is a characteristic species.

BETULACEÆ.

(*Birch Family.*)

BETULA

- Cherry Birch. 1019. *lenta*, L. (***) Th.
Ann Arbor—Allmend. Cat.; S. Haven—Bailey; near Lansing—Prof. W. J. Beal; Hubbardston(!); Flint; and northward to L. Superior. Rare in the south, but attains a "monstrous size" on Drummond's I.—Winch. Cat.
Yellow Birch. 1020. *lutea*, Michx. f. Th.
Ann Arbor—Winch. Cat.; S. Haven—Bailey; to L. Superior. "Common along the line of the F. & P. M. R. R., and northward to the Traverse country; a large tree; timber valuable."—Prof. W. J. Beal. Rare south of the Grand-Saginaw valley.
Paper Birch. 1021. *papyracea*, Ait. (***) Th.
Canoe Birch. Extends southward to Lansing and perhaps further. Frequent at
Silver Birch. Crystal Lake, Montcalm Co.(!) as a small tree. Often springs up, forming a dense thicket, where pine lands have been burned over. Bark separating into thin, papery strips, used by Indians for canoes, basket-work, etc. A large tree at the north.
Low Birch. 1022. *pumila*, L. Th.
Swamps. Frequent.
1023. *glandulosa*, Michx. U. P.
Burt's MS. Cat.

ALNUS

- Green or Mountain Alder. 1024. *viridis*, DC. U. P.
"Dry rocky land"—Whitney Cat.; Isle Royale—Dr. A. B. Lyons. Common.
Speckled or Hoary Alder. 1025. *incana*, Willd. (***) Th.
Tag-Alder. Borders of streams. The prevailing Alder in center of the State and in U. P. Common.

- Smooth Alder. 1026. *serrulata*, Ait. (***) Th.
 Macomb Co.; Traverse City and S. Mich.—Winch. Cat.; Burt. MS. Cat.
 Rare or local.

SALICACEÆ.

(Willow Family.)

Rarer sp. determined by M. S. Bebb, of Fountaindale, Illinois.

SALIX

- Hoary Willow. 1027. *candida*, Willd. Th.
 Usually in Tamarack swamps. Rare in S. part of the State. Com.
- Prairie Willow. 1028. *humilis*, Marshall. Th.
 Not reported south of Lansing. Common along the line of D. M. & G. H. R. R.; Ionia Co. (!); and northward to Marquette Co.—Burt MS. Cat.
- Glaucous Willow. 1029. *discolor*, Muhl. (***) Th.
 River banks. This species and the preceding are much visited by bees in early spring for pollen and honey. Common.
- Silky-leaved Willow. 1030. *sericea*, Marshall.
 Drummonds' Is.—Winch. Cat.; Ionia Co. (!); and southward to S. Haven—Bailey. Very common in central part of the State.
- Petioled Willow. 1031. *petiolaris*, Smith. Th.
 With the last. From Sault Ste. Marie southward. Ionia Co. (!); Lansing—Bailey. Frequent.
- Basket Osier. 1032. *viminialis* L.
 Woodard Lake, Ionia Co. (!); S. Haven,—Bailey.
- Heart-leaved Willow. 1033. *cordata*, Muhl. Th.
 Along streams. Narrow-leaved forms occur in the central and southern parts of the State; at Petoskey (!), broadly ovate-heart-shaped leaved forms occur. Common.
- Glaucous Willow. 1034. *glaucophylla*, M. S. Bebb, *sp. nov. ined.*

Hubbardston (!); Petoskey (!); frequent along the shores of Little Traverse Bay (!). Has been confounded with *S. Barclayi*, Anders. (See Bot. Gaz., March, 1878.)

The following notes and description of this interesting species and its varieties have been furnished by Mr. Bebb, who is preparing a Monograph on the *Salicaceæ*:

"*S. glaucophylla*, n. sp. Leaves broadly ovate or elliptical lanceolate, rounded or narrowed at base, apex more or less cuspidate acuminate, coriaceous in texture, glabrous, dark green above except the yellowish midrib, intensely glaucous and obscurely reticulate veined beneath, the young drying black, margin sharply serrate with glandular inflexed serratures, petioles short downy, stipules ovate, serrate; aments with leaf-like bracts at base, thick, cylindrical, densely flowered appearing with the leaves, when in flower about one inch long; the fertile when mature sometimes very large, 3 inches long, $\frac{3}{4}$ in. thick; capsules elongated-conical from an ovate base 3-5 lines long, glabrous, greenish, turning brown in drying; pedicels 4-5 times the length of the nectary, concealed by the copious long white hairs with which the scales are clothed; style produced; stigmas short thick, entire or 2-lobed.

"Var. *latifolia*. Leaves crowded, broadly ovate-lanceolate, rounded or sub-cordate at base, 3-4 inches long, nearly 2 inches wide, stipules conspicuous, reniform. Chicago, *Babcock*, exsicc. No. 3, 4, 13, 15, 47; Madison, Wisconsin, *S. H. Watson*, in Herb. Canby. Fountaindale (!).

"Var. *angustifolia*. Leaves lanceolate cuspidate, narrowed at base, 3 in. long, $\frac{3}{4}$ in. wide; stipules small, often wanting; aments elongated-cylindrical. Chicago, *Babcock*, exsicc. 14, 28, 45, 2 $\frac{1}{2}$, 8.

"Var. *brevifolia*. Leaves obovate, acute, wedge-shaped at base, 1 $\frac{1}{2}$ inches long, 5-6 lines wide, prominently reticulate veined; stipules none. Leaves strikingly like those of *S. arbuscula*. Sand dunes, Little Traverse Bay, Mich., July 30, '79. C. F. Wheeler.

"Ten years ago I was inclined to regard this as a robust variety, of *S. cordata*, but in a constantly increasing accession of specimens, from the most luxuriant growth down to the starveling of the arid sand dunes of Lake Michigan, it was always clearly recognizable as something distinct from *S. cordata*. I next tried to find a place for it under *S. Barclayi* Anders., being misled by the author's assertion that *S. Barclayi* was very nearly related to *S. cordata*, of which it might be regarded as a "quasi modificatio occidentalis robustior," with "shorter and broader leaves" "turning black," etc.; misled, also, by the figure in the *Monographia Salicium*, which, whatever it may represent, was certainly not

drawn from the type specimen of *S. Barclayi*. This (*S. Barclayi*) was published as a new species in the author's preliminary Synopsis of N. A. Willows, 1858, based wholly upon a single specimen (in Herb. Hook.) from Kodiak, *Barclay*, and on p. 31, l. c. it was arranged in a group of American species, "manifestly representing European types" as "belonging to the type of *S. glauca*."

"It answers my present purpose to show that *S. glaucophylla*, n. sp. differs widely from the typical *S. Barclayi* in its smooth capsules, longer pedicels, shorter style, and very different stigmas. It also differs from *S. cordata* in the leaves proportionately shorter and broader with somewhat the texture of *S. lucida*, the young drying black, more glaucous beneath, especially when old; aments thicker and more densely hirsute (much as in *S. discolor*); capsules very much larger and drying brown. As indigenous at Fountindale, this is a straggling shrub, about 6 feet high, the young twigs glabrous and bright yellow, stained with crimson where exposed to much sunlight. Some of the plants in the Salicetum however, are more erect, 8 feet high, brownish twigs, puberulent, and the whole habit that of *S. discolor*."

1035. *balsamifera*, Barrett.

Only found at Flint, by Dr. D. Clark. Station since destroyed,

1036. *adenophylla*, Hook.

Leaves ovate, ovate-lanceolate, cordate, glandular-serrate, densely tomentose. On old stems the leaves are ovate-lanceolate and *densely tomentose all over*, while on young shoots they are broadly ovate, cordate, and sometimes smooth late in the season. Low, 2.5 feet. Beach sand, Lake Michigan, Illinois, and northwestward. Petoskey (!); St. Jo., Dr. Wright in Torr. Herb.—Bebb. Hooker's original specimens came from Labrador. "Well marked by the copious, long, narrow serratures to the leaves tipped with a gland, so that the leaf looks as if it were fringed with pedicellate glands. These leaves are an inch or more long, clothed, even when fully grown, with long silky tomentum on both sides, etc."—Part of Hooker's original description of specimen in Harvard Herb.

Tomentous Willow.

Livid Willow.

Shining Willow.

Black Willow.

White Willow.

Brittle W.

Long-leaved Willow.

Myrtle Willow.

1037. *rostrata*, Richardson.

Moist or dry ground.

1038. *lucida*, Muhl.

Along streams.

1039. *nigra*, Marshall. (***)

Along streams; a small tree.

1040. *amygdaloides*, Anders.

Flint,—Dr. Clark.

1041. *alba*, L., var. *vitellina*, Carey.

Naturalized from Europe.

1042. *fragilis*, L., var. *Russelliana*, Carey.

Coleman Cat.; Palmer Cat.

1043. *longifolia*, Muhl.

Wet places.

1044. *myrtilloides*, L.

Sphagnous swamps. S. E.—Winch. Cat. Ionia (!); etc., to L. Superior. Frequent.

POPULUS

Poplar. American Aspen.

Large-toothed Aspen.

Cotton-wood. Necklace Poplar.

Balsam Poplar.

Balm of Gilead.

1045. *tremuloides*, Michx. (***)

Woods and lake shores, most abundant in U. P.—Whitney. Common.

1046. *grandidentata*, Michx.

Woods. Common northward, but "rare in U. P."—Whitney Cat. This tree and the last are being ground into pulp for making paper.

1047. *monilifera*, Ait.

Often a large tree, three feet in diameter. Not observed north of Crystal Lake, Montcalm Co. (!)

1048. *balsamifera*, L. (***)

River banks. A small tree in Michigan, often mistaken for the next.

1049. *balsamifera*, L., var. *candicans*, Gray. (***)

Not common, either wild or in cultivation, but certainly indigenous. S. Haven—Bailey; Flint; Sanford, Midland Co.—Prof. W. J. Beal; Elk Rapids—Winch. Cat.

Th.

Com.

Th.

Common.

Th.

Th.

Common.

Th.

Frequent.

Th.

Common.

Th.

C. & S.

Th.

Lombardy
Yew.
Poplar.

- 1050.
- dilatata*
- , Ait.
-
- Common in cultivation.

L. P.

TAXACEÆ.

(Yew Family.)

TAXUS

American
Yew.
Ground Hem-
lock.

- 1051.
- baccata*
- , L., var.
- Canadensis*
- , Gray. (***)

Moist woods in the shade of evergreens. Along the east shore of Lake Michigan as far south as S. Haven.—Bailey; Grand Ledge.—Beal; Macomb Co., where it is rarely found. Common north of the center of the State(!).

CONIFERÆ.

(Pine Family.)

JUNIPERUS

Red Cedar.
Savin.

- 1052.
- Virginiana*
- , L. (**)

Bluffs and sterile soil.

Th.

Throughout, but scarce.

Juniper.

- 1053.
- communis*
- , L. (*)

Frequent throughout, along the highest grounds.

Savin.

- 1054.
- Sabina*
- , L., var.
- procumbens*
- , Ph. (*) N. & U. P.

Abundant, trailing over low sand dunes at the head of Little Traverse Bay (!); Old Mission,—Prof. W. J. Beal, etc.

THUJA

Arbor-vitæ.
White Cedar.

- 1055.
- occidentalis*
- , L. (***)

Th.

Very common northward. Timber very durable, much used for fence posts, etc.

ABIES

Balsam Fir.

- 1056.
- balsamea*
- , Marshall. (*)

C. N. & U. P.

Frequent in the northern part of Clare Co. (!); abundant at Petoskey (!); and northward.

TSUGA

Hemlock.

- 1057.
- Canadensis*
- , Carrière. (*)

Th. except S. E.

Rarely seen south of latitude 43° except west, and scarce on the Huron shore, but common on the east shore of L. Michigan, and from the central part of the State northward. Very abundant and of great size in Emmet Co.(!). Bark an article of commerce, used for tanning.

PICEA

White Spruce.

- 1058.
- alba*
- , Link.

N. & U. P.

From Ludington,—Prof. Beal; to Petoskey (!); and northward. Common.

Black Spruce.

- 1059.
- nigra*
- , Link. (***)

Th.

Frequent northward, and occasional south of lat. 43°,—a small tree in sphagnous swamps. The preceding species is more common northward.

LARIX

American
Larch.
Tamarack.

- 1060.
- Americana*
- , Michx. (***)

Th.

Swamps. A slender tree southward, but sometimes reaching 100 feet in height northward, where it is abundant.

PINUS

Scrub Pine.
Gray Pine.1061. *Banksiana*, Lambert.

In the western part of the State, noticed as far south as Newaygo Co. (!); "Sand Pt., Saginaw Bay, and northward along the shore of L. Huron, not common."—Winch. Cat. In the Central part of the State this pine is first seen in the northern part of Clare Co. (!), where it is common in groves on sandy barrens. In the S. E. township of Missaukee Co., along the west bank of the Muskegon river, occurs a barren terrace, about five miles long by two wide, which is covered with groves of this pine in all stages of growth from seedlings to fine shapely trees 50 to 60 feet in height, and 12 to 14 inches in diameter. The groves were not dense, but orchard-like, and disposed without regularity. There was little undergrowth except occasionally a few sand-cherries, stunted service bushes, and the rare alpine, three-toothed cinquefoil. The ground was barely carpeted with tufts of panic grass (*P. depauperatum*, L.) bird-foot violet, and bear berry.

Red Pine.
Norway Pine.1062. *resinosa*, Ait.

Dry woods. First noticed in Isabella Co., in center of the L. P.; very abundant in Clare Co. (!), and northward. "Frequent on low, sandy plains in U. P., where it forms orchard-like groves."—Whitney. Usually 100-110 feet high.

White Pine.

1063. *Strobus*, L.

Th.

Ranges from at least Mason, Ingham Co., in the center of the State, northward. Follows the shore of L. Michigan to the Indiana line. Usually 3 to 4 feet in diameter and 100 feet high, but often larger. Furnishes the pine lumber of commerce. The tallest white pine we have measured was 134 feet, and the largest diameter, scant 6 feet. Much taller and larger specimens are reported by lumbermen. The annual production of pine lumber in Michigan for the last decade has exceeded 2,000,000,000 feet. Yet, in spite of this enormous consumption, it is safe to say that Michigan still contains more valuable pine than any like area in North America. The lumber interest alone enriches the State something like \$10,000,000 a year.

ARACEÆ.

(Arum Family.)

ARISÆMA

Indian Turnip.
Jack-in-the-
Pulpit.1064. *triphyllum*, Torr. (***)

Th.

Rich woods.

Green Dragon.
Dragon Root.1065. *Dracontium*, Schott. (***)

C. & S.

Low grounds.

Infrequent.

PELTANDRA

Arrow Arum.

1066. *Virginica*, Raf.

C. & S.

S. Mich.—Wright Cat.; Huron River—Allmendinger Cat.; Ionia Co. (!); Flint.

CALLA

Water Arum.

1067. *palustris*, L.

Th.

Bogs.

Frequent.

SYMPLOCARPUS

Skunk Cab-
bage.1068. *foetidus*, Salisb. (**)

Th.

ACORUS

Sweet Flag.

1069. *Calamus*, L. (**)

Th.

Margin of streams.

Infrequent.

LEMNACEÆ.

(Duck-weed Family.)

LEMNA

Duckweed.
Duck's-meat.1070. *trisolca*, L.

C. & S.

Ponds.

Common.

| | | |
|--------------|---------------------------------|---------|
| Duck's-meat. | 1071. minor, L. | C. & S. |
| | Ponds. Blossoms freely in June. | Common. |
| Duck's-meat. | 1072. perpusilla, Torr. | C. & S. |
| | Ponds. Dr. A. B. Lyons. | |
| Duck's-meat. | 1073. polyrrhiza, L. | C. & S. |
| | Ponds. | Common. |

WOLFFIA

1074. Columbiana, Karsten.

Abundant on Maple River, Clinton Co.(!); Ionia Co.(!); Detroit—J. M. Bigelow.

1075. Brasiliensis, Weddell.

With the last. Nearly covering the surface of ponds and slow streams in July.

TYPHACEÆ.

(*Cat-tail Family.*)

TYPHA

| | | |
|---------------------|--------------------------|----------------|
| Common Cat-tail. | 1076. latifolia, L. | Th. Common. |
| | Borders of streams. | |
| Small Cat-tail. | 1077. angustifolia, L. | |
| | Detroit—Dr. A. B. Lyons. | |

SPARGANIUM

| | | |
|-----------|--|----------------------|
| Bur-reed. | 1078. eurycarpum, Engelm. | C. & S. Frequent. |
| | Borders of ponds. | |
| Bur-reed. | 1079. simplex, Hudson., var. Nuttallii, Gr. | |
| | Fruitport—E. J. Hill. | |
| Bur-reed. | 1080. simplex, Hud., var. androcladum, Gr. | C. & S. |
| | Ann Arbor—Allmendinger Cat.; Macomb Co. | |
| Bur reed. | 1081. simplex, Hud., var. angustifolium, Gr. | U. P. |
| | Isle Royale—Whitney Cat. | |
| Bur-reed. | 1082. heterophylla, var. rigida, Engelm. | |
| | Fruitport—E. J. Hill. | |
| Bur-reed. | 1083. minimum, Bauhin. | |
| | Hubbardston(!); Manistee—E. J. Hill. | Rare. |

NAIADACEÆ.

(*Pond-weed Family.*)

NAIS

| | | |
|--------|------------------------|-----------|
| Naiad. | 1084. major, All. | |
| | Flint—Dr. D. Clark. | |
| Naiad. | 1085. flexilis, Rostk. | Th. |
| | Ponds. | Frequent. |

ZANNICHELLIA

| | | |
|-------------------|---------------------|--|
| Horned Pond-weed. | 1086. palustris, L. | |
| | Dr. A. B. Lyons. | |

POTAMOGETON

| | | |
|------------|------------------|-----------|
| Pond-weed. | 1087. natans, L. | Th. |
| | Ponds. | Frequent. |

- Pond-weed. 1088. *Claytonii*, Tuckerman.
Ionia Co. (!); Macomb Co.—Dr. D. Cooley; Fruitport—E. J. Hill.
- Pond-weed. 1089. *lateralis*, Morong.
Bear Lake, Van Buren Co.—E. J. Hill.
- Pond-weed. 1090. *Spirillus*, Tuckerman. U. P.
"Lake Superior"—Gray's Manual.
- Pond-weed. 1091. *hybridus*, Michx. Th.
Dr. A. B. Lyons.
- Pond-weed. 1092. *rufescens*, Schrader. Th.
Mud Lake and Bear River, Petoskey—E. J. Hill.
- Pond-weed. 1093. *lonchites*, Tuckerman. C. & S.
Hubbardston (!); Macomb Co. Infrequent.
- Pond-weed. 1094. *amplifolius*, Tuckerman. L. P.
Maple River (!); Macomb Co.; Pere Marquette River at Ludington—E. J. Hill.
- Pond-weed. 1095. *gramineus*, L., var. *graminifolius*, Fries.
Bear Lake, Van Buren Co.—E. J. Hill.
- Pond-weed. 1096. *gramineus*, L., var. *heterophyllus*, Fries. Th.
Woodard Lake, Ionia Co. (!); Flint; Macomb Co.; and northward.
- Pond-weed. 1097. *lucens*, L.
Muskegon River, near Houghton Lake (!); Flint; S. Mich.—Wright Cat.
- Pond-weed. 1098. *zizii*, Schum.
Crystal Lake, near Frankfort, and Bear Lake, Manistee Co.—E. J. Hill;
Crystal Lake, Montcalm Co. (!); and Woodard Lake, Ionia Co. (!).
- Pond-weed. 1099. *prælongus*, Wulfen. Th.
Maple River (!), etc. Common.
- Pond-weed. 1100. *perfoliatus*, L. Th.
Maple River (!), etc. Common.
- Pond-weed. 1101. *perfoliatus*, L., var. *lanceolatus*, Robbins.
Little Traverse Bay, etc.; "Along the Great Lakes"—Gray.
- Pond-weed. 1102. *zosteræfolius*, Sch. Th.
Maple River and its tributaries (!), etc. Common.
- Pond-weed. 1103. *obtusifolius*, Mertens & Koch.
"Floating in Gratiot Lake, N. Mich."—Gray's Manual.
- Pond-weed. 1104. *panciflorus*, Pursh. Th.
Hubbardston (!); Grand Rapids (!); Flint; Macomb Co.; and northward.
- Pond-weed. 1105. *pusillus*, L.
Manistee Lake—E. J. Hill.
- Pond-weed. 1106. *pusillus*, L., var. *major*, Fries.
Crooked River, Cheboygan Co., and common at Manistee and Frankfort—E. J. Hill.
- Pond-weed. 1107. *pectinatus*, L. Th.
Fish Creek, Hubbardston (!). Frequent.
- Pond-weed. 1108. *marinus*, L.
Crystal Lake, near Frankfort, Benzie Co.—E. J. Hill. Rarer species determined by E. J. Hill, of Engelwood, Illinois, whose knowledge of this difficult genus is well known.

ALISMACEÆ.

(*Water-Plantain Family.*)

TRIGLOCHIN

- Arrow-grass. 1109. *palustre*, L. Th.
Marshes. Frequent.

- Arrow-grass. 1110. *maritimum*, L.
Macomb Co.; S. Mich.—Wright Cat.; Petoskey (!).
Arrow-grass. 1111. *maritimum*, L., var. *elatum*, Gr. Th.
Ann Arbor,—Allmendinger Cat.; Flint; Macomb Co.; and northward.

SCHEUCHZERIA

- Scheuchzeria. 1112. *palustris*, L.
S. W.—Wright Cat.; Macomb Co.; Hubbardston (!); Montcalm Co. (!).
Frequent northward in cold bogs.

ALISMA

- Water Plantain. 1113. *Plantago*, L., var. *Americanum*, Gr. (***) Th.
Shallow water. Common.

ECHINODORUS

1114. *parvulus*, Engelm.
Dr. A. B. Lyons.

SAGITTARIA

- Arrow-head. 1115. *variabilis*, Engelm. Th.
Wet places. Occurs in many forms. Common.
Arrow-head. 1116. *heterophylla*, Ph. Th.
Elk Rapids,—Winch. Cat., etc.
Arrow-head. 1117. *heterophylla*, Ph., var. *rigida*, Engelm.
Fruitport,—E. J. Hill.
1118. *graminea*, Michx. S.
Dr. A. B. Lyons.

HYDROCHARIDACEÆ.

(*Frog's-bit Family.*)

ANACHARIS

- Water-weed. 1119. *Canadensis*, Planchon. Th.
Slow streams. Common.

VALLISNERIA

- Tape-grass. 1120. *spiralis*, L. L. P.
Eel-grass. Ann Arbor—Winch. Cat.; S. Haven,—Bailey; Hubbardston (!); to Petoskey (!). Slow streams. Common in Grand River and tributaries.

ORCHIDACEÆ.

(*Orchis Family.*)

ORCHIS

- Showy Orchis. 1121. *spectabilis*, L. C. & S.
Rich woods. Widely distributed. Scarce.
1122. *rotundifolia*, Ph. (?)
Flint—Dr. D. Clark; "Shore of L. Mich. in Wis."—Foote.

HABENARIA

- Naked-gland Orchis. 1123. *tridentata*, Hook. Th.
S. W.—Wright Cat.; Ann Arbor—Allmend. Cat.; Hubbardston (!); and northward.
Greenish Orchis. 1124. *virescens*, Spreng. C. & S.
Macomb Co.; Ann Arbor,—Winch. Cat.; S. W.—Wright Cat.
Bracted Green Orchis. 1125. *viridis*, R. Br., var. *bracteata*, Reich. Th.
Ann Arbor and Emmet Co.—Winch. Cat.; Macomb Co.; Kalamazoo; Hubbardston (!); Flint; Lansing—Bailey.

- Northern Green Orchis. 1126. *hyperborea*, R. Br. Th.
Wet woods. Common.
- Northern White Orchis. 1127. *dilatata*, Gr. Th.
S. E.—Winch. Cat.; Flint; Macomb Co.; and northward.
1128. *obtusata*, Richardson. U. P.
Isle Royale—Dr. A. B. Lyons; L. Sup., common—Whitney Cat.; Cove I. L. Huron—Austin.
- Smaller Two-leaved Orchis. 1129. *Hookeri*, Torr. Th.
S. E.—Winch. Cat.; Hubbardston (!); Flint; Lake Superior—Whitney Cat.
- Large Round-leaved Orchis. 1130. *orbiculata*, Torr. Th.
Frequent in the pine region, not rare on U. P.—Whitney Cat.; Lansing—Bailey; Hubbardston (!); Flint, etc.
- Yellow Fringed-Orchis. 1131. *ciliaris*, R. Br. S. E.
Ann Arbor—Winch. Cat.; Macomb Co. Rare.
- White Fringed-Orchis. 1132. *blephariglottis*, Hook. C. & S.
S. Mich.—Winch. Cat.; Stanton (!). Rare.
- Western Orchis. 1133. *leucophæa*, Gray.
Ann Arbor—Winch. Cat.; Woodard Lake, Ionia Co. (!); Macomb Co. Rare.
- Ragged Orchis. 1134. *lacera*, R. Br. C. & S.
Ann Arbor—Winch. Cat.; Woodard Lake (!); Flint; Macomb Co.; Lansing—Bailey. Infrequent.
- Small Purple Fringed-Orchis. 1135. *psycodes*, Gray. Th.
Low grounds. Frequent.
- Large Purple Fringed-Orchis. 1136. *fimbriata*, R. Br.
Ann Arbor—Winch. Cat.; Macomb Co. Infrequent.

GOODYERA

- Rattlesnake Plantain. 1137. *repens*, R. Br. Th.
Bangor, Van Buren Co.—Bailey; Grand Rapids—Coleman Cat.; Roscommon Co.—Dr. Cooley; Petoskey (!); and northward. Infrequent.
- Rattlesnake Plantain. 1138. *pubescens*, R. Br. Th.
Woods. Common.
- Rattlesnake Plantain. 1139. *Menziesii*, Lindl. N. & U. P.
Boyne Falls, Northport, and Frankfort—E. J. Hill; Petoskey (!); Isle Royale and Traverse Bay—Dr. A. B. Lyons.

SPIRANTHES

- Ladies' Tresses. 1140. *latifolia*, Torr. Th.
Drummond's I., common, and S. E.—Winch. Cat.; Hubbardston (!); Flint. Rare in L. P.
- Ladies' Tresses. 1141. *Romanzoviana*, Chamisso. N. & U. P.
Borders of Mud lake, Northport—E. J. Hill; northward to L. Sup.
- Ladies' Tresses. 1142. *cernua*, Richard. Th.
Sphagnous swamps. Frequent.
- Ladies' Tresses. 1143. *gracilis*, Bigelow.
S. W.—Wright Cat.; Macomb Co.; Grand Rapids—Coleman Cat.; Kalamazoo—Tuthill.

LISTERA

- Twayblade. 1144. *cordata*, R. Br. U. P.
Whitney Cat.; and Isle Royale—Dr. A. B. Lyons.
- Twayblade. 1145. *convallarioides*, Hook. U. P.
Not common—Whitney Cat.; Isle Royale—Dr. A. B. Lyons.

ARETHUSA

- Arethusa. 1146. *bulbosa*, L. Th.
In sphagnous swamps. S. Mich.—Wright Cat.; Ann Arbor—Allmend. Cat.; Kalamazoo—Tuthill; Hubbardston (!); and northward. Rare.

POGONIA

- Pogonia. 1147. *ophioglossoides*, Nutt. Th.
Bogs. Common.
- Pogonia. 1148. *pendula*, Lindl. S. W.
Dr. Wright. Rare.
- Pogonia. 1149. *verticillata*, Nutt. C. & S.
Kalamazoo; Flint; Macomb Co. Rare.

CALOPOGON

- Beautiful Calopogon. 1150. *pulchellus*, R. Br. Th.
Bogs. Common.

CALYPSO

- Calypso. 1151. *borealis*, Salisb.
Forty-mile Point, Presque Isle Co.—Winch. Cat.; shores of Higgins Lake—
Dr. D. Cooley; Mackinac—Whitney Cat.; L. Superior—J. Macoun, in
Can. Cat. Local.

TIPULARIA

- Crane-fly Orchis. 1152. *discolor*, Nutt.
Coleman Cat.; "N. Mich., Dr. Cooley"—Winch. Cat.; eastern coast of L.
Huron—J. Macoun. Our rarest orchid.

MICROSTYLIS

- Adder's-mouth. 1153. *monophyllos*, Lindl.
Hubbardston(!); Flint; Macomb Co. Rare.
- Adder's-mouth. 1154. *ophioglossoides*, Nutt.
Ann Arbor—Allmendinger Cat.; Hubbardston(!). Rare.

LIPARIS

- Twayblade. 1155. *Læselii*, Richard.
Ann Arbor—Allmendinger Cat.; abundant in a tamarack swamp near
Hubbardston(!); S. Haven—Bailey; Flint; Macomb Co.
- Twayblade. 1156. *liliifolia*, Richard.
S. W.—Wright's Cat.

CORALLORHIZA

- Coral-root. 1157. *innata*, R. Br. Th.
S. E.—Wright Cat.; L. Superior, not rare—Whitney Cat.
- Coral-root. 1158. *odontorrhiza*, Nutt. (***) Th.
Hubbardston(!); Flint; northward to L. Superior—Whitney Cat.
- Coral-root. 1159. *multiflora*, Nutt. Th.
Hubbardston(!); Lansing—Bailey; S. W.—Wright Cat.; northward to L.
Superior.
- Coral-root. 1160. *Macraei*, Gray.
Abundant at Mackinac—Whitney Cat.

APLECTRUM

- Putty-root. 1161. *hyemale*, Nutt. C. & S.
Adam-and-Eve. Rich woods. Ann Arbor—Allmend. Cat.; Lansing—Bailey; Detroit—Gill
man; Macomb Co.; Montcalm Co. (!); Flint; Hubbardston (!); Grand
Rapids—Coleman's Cat. Scarce.

CYPRIPEDIUM

- Ram's head Lady's Slip-per. 1162. *arietinum*, R. Brown. (***) U. P.
Isle Royale—Dr. A. B. Lyons. May be looked for in L. P.
- Small White Lady's Slip-per. 1163. *candidum*, Muhl. (***) C. & S.
Tamarack swamps. Ann Arbor—Winch. Cat.; Kalamazoo; Macomb Co.,
Flint; Hubbardston (!). Rare.

- Smaller Yellow Lady's Slipper. 1164. *parviflorum*, Salisb. (**) Th.
Swamps. A slender species; leaves slightly pubescent, not much plaited; flowers much smaller than those of the next; corolla bright yellow and much brown spotted inside in lines; sepals and side petals dark brown-purple, the latter several times twisted. Usually grows in clumps, preferring very wet swamps. Frequent.
- Larger Yellow Lady's Slipper. Moccasin-Flower. 1165. *pubescens*, Willd. (**) L. P.
Woods, in moist or dry ground. Much coarser every way than the preceding, with strongly-plaited, hairy leaves, and large light yellow flowers, more or less brown-spotted. Small forms of this are often mistaken for *C. parviflorum*, but the two species are apparently distinct in Mich. Common.
- Showy Lady's Slipper. Pink L. S. 1166. *spectabile*, Swartz. (***) C. & S.
Swamps. The largest species, as well as the most beautiful; leaves frequently 6x10 inches. Ann Arbor—Winch. Cat.; Kalamazoo—Tuthill; Lansing—Bailey; Macomb Co.; Flint; Hubbardston (!), etc. Desirable for cultivation. Frequent.
- Stemless Lady's Slipper. 1167. *acaule*, Ait. (***) Th.
Moist woods and sphagnum swamps. Montcalm Co. (!), etc. Frequent.

AMARYLLIDACEÆ.

(Amaryllis Family.)

HYPOXYS

- Star-grass. 1168. *erecta*, L. C. & S.
Meadows. Common.

HÆMODORACEÆ.

(Bloodwort Family.)

ALETRIS

- Colic root. Star-grass. 1169. *farinosa*, L. (**) C. & S.
Ann Arbor—Allmend. Cat.; Macomb Co.; Flint; Hubbardston (!). Rare.

IRIDACEÆ.

(Iris Family.)

IRIS

- Wild Flower-de-Luce. Larger Blue Flag. Lake Dwarf Iris. 1170. *versicolor*, L. (**) Th.
Low grounds. Common.
1171. *lacustris*, Nutt.
Bois Blanc I. and Drummond's I.—Winch. Cat.; Mackinac—Whitney Cat.; "Shores of L. Huron and Mich."—Gray, Lewis Foote, *et al.*

SISYRINCHIUM

- Blue-eyed Grass. 1172. *Bermudiana*, L. Th.
Moist grassy places. Common.

DIOSCOREACEÆ.

(Yam Family.)

DIOSCOREA

- Wild Yam-root. 1173. *villosa*, L. (**) C. & S.
Rich woods. Frequent.

SMILACEÆ.

(Smilax Family.)

SMILAX

- Common Greenbriar. 1174. *rotundifolia*, L. C. & S.
Ann Arbor—Allmend. Cat.; Flint; Macomb Co.; Kent Co.—Coleman Cat.
- Common Greenbriar. 1175. *hispida*, Muhl. Th.
The common woody species in Ionia and adjacent counties. Ann Arbor—Winch. Cat.; Hubbardston (!); Flint; Houghton Lake (!); northward to Lake Superior—Whitney Cat.
- Garrison Flower. 1176. *herbacea*, L. Th.
River banks. Flowers much visited by blow-flies. Common.
- Garrison Flower. 1177. *herbacea*, L., var. *pulverulenta*, Gr.
Ann Arbor—Allmend. Cat.

LILIACEÆ.

(Lily Family.)

TRILLIUM

- Sessile Trillium. 1178. *sessile*, L. S.
Dr. A. B. Lyons.
- Large White Trillium, or Wake Robin. 1179. *grandiflorum*, Salisb. (***) Th.
Rich woods, Exceedingly variable and apt to sport. Common.
- Birthroot. 1180. *erectum*, L. (***)
Ann Arbor—Winch. Cat. Rare.
- Birthroot. 1181. *erectum*, L., var. *album*, Ph.
Ann Arbor—Winch. Cat. Rare.
- Birthroot. 1182. *erectum*, L., var. *declinatum*, Gr.
The common form in low ground from the C. north. Fruit dark red, six-ribbed, $\frac{1}{8}$ in. in diameter—larger than the fr. of *T. grandiflorum*.
- Nodding Trillium. 1183. *cernuum*, L. C. & S.
S. Mich.—Winch. Cat.; Macomb Co.; Flint; Grand Rapids.—Coleman Cat.
- Dwarf White Trillium. 1184. *nivale*, Riddell. C. & S.
Low woods. One of our earliest spring flowers. Only observed along Grand River Valley. Hubbardston (!); Ionia (!); Grand Rapids.—Coleman Cat. Rare.
- Painted T. 1185. *erythrocarpum*, Michx.
S. Mich.—Wright Cat.; not observed in the center of the State; said to occur in U. P.—Gray's Manual.

MEDEOLA

- Indian Cucumber-root. 1186. *Virginica*, L. (***) L. P.

MELANTHIUM

1187. *Virginicum*, L.
Macomb Co.—Dr. D. Cooley.

ZYGADENUS

- Zygadene. 1188. *glaucus*, Nutt. L. P.
S. W.—Wright Cat.; Dexter,—Dr. Elmore Palmer; Ann Arbor—Allmend. Cat.; Ionia (!); Davisburgh (!); Petoskey (!). Rare.

VERATRUM

- American White Hellebore. 1189. *viride*, Ait. (?) (*)
Dr. A. B. Lyons.

CHAMÆLIRIUM

- Devil's Bit. 1190. *luteum*, Gray. (***)
Dr. A. B. Lyons.

TOFIELDIA

- False Asphodel. 1191. *palustris*, Hudson. U. P.
Isle Royale,—Dr. A. B. Lyons.

- False Asphodel. 1192. *glutinosa*, Willd. Th.
Sphagnous swamps. Frequent.

UVULARIA

- Large-flow-er'd Bellwort. 1193. *grandiflora*, Smith. U. & S.
Rich woods. Common.

- Mealy Bell-wort. 1194. *perfoliata*, L. Th.
Rich woods. Marquette Co.—Burt MS. Cat.; Flint; Macomb Co. Infrequent.

OAKESIA

- Sessile-leaved Oakesia. 1195. *sessilifolia*. Th.
Wild Oats. Low woods. Apparently infrequent S. Ann Arbor—Allmend. Cat.; Ypsilanti (!); Flint; Macomb Co.; Crystal Lake, Montcalm Co. (!); and northward to Marquette Co.,—Whitney Cat.

STREPTOPUS

- Twisted-stalk. 1196. *amplexifolius*, DC.
Fort Gratiot.—Winch. Cat.; Houghton Lake (!); to L. Superior where it is rare—Whitney Cat.

- Twisted-stalk. 1197. *roseus*, Michx.
Drummond's Is. and Sugar Is.—Winch. Cat.; to L. Superior where it is very common—Whitney Cat.

CLINTONIA

- Clintonia. 1198. *borealis*, Raf. Th.
Follows the Lake Michigan shore down as far as S. Haven; on the eastern side of the State reaches to Macomb Co.—Dr. D. Cooley; and in the center of the State is found in Ionia Co. (!). Very common north of latitude 43°.

SMILACINA

- False Solomon's Seal. 1199. *racemosa*, Desf. (***) Th.
False Spike-nard. Moist grounds. Common.

1200. *stellata*, Desf. Th.
Moist banks. Common.

1201. *trifolia*, Desf. Th.
Sphagnous swamps. Frequent.

MAIANTHEMUM

1202. *bifolia*, DC. Th.
Woods, everywhere.

POLYGONATUM

- Smaller Solomon's Seal. 1203. *biflorum*, Ell. (***) Th.
Ann Arbor.—Winch. Cat.; Ionia Co. (!); and northward. Open woods. Common.

- Great S. S. 1204. *giganteum*, Dietrich. (***) Th.
River banks. Stems often very tall and channeled on one side. Intermediate forms between this and the preceding, occur.

ASPARAGUS

- Asparagus. 1205. *officinalis*, L. (***)
Sparingly escaped from gardens in older parts of the State.

LILIUM

- Wild Orange-red Lily. 1206. *Philadelphicum*, L. Th.
Ann Arbor—Allmend. Cat.; Hubbardston (!); Petoskey (!); and northward. Not common in the central part of the State.
- Wild Yellow Lily. 1207. *Canadense*, L. Th.
Meadows and along streams. Common in the center of the State.
1208. *superbum*, L. C. & S.
Low grounds. Ann Arbor (Miss Clark)—Winch. Cat.; Flint; S. Haven—Bailey.

ERYTHRONIUM

- Dog's tooth Violet. 1209. *Americanum*, Smith. (***) Th.
Yellow Ad-der's-tongue. Low copses. Common.
- White A. 1210. *albidum*, Nutt. C. & S.
White Dog's-tooth Violet. Ann Arbor—Allmend. Cat.; Lansing—Bailey; Macomb Co.; Flint; Hubbardston (!). "At L. Superior Dr. Robbins found a plant like this but *yellow-flowered*, a transition towards *E. grandiflorum*."—Gray's Man.

ALLIUM

- Wild Leek. 1211. *triccocum*, Ait. Th.
Rich woods. Cattle pastured in woodlands in early spring are sure to find and eat this plant, and the "garlic" odor of wild leek is only too well known to butter buyers in the rural districts.
- Wild Onion. 1212. *cernuum*, Roth. S.
Ann Arbor—Allmend. Cat.; Put-in Bay, O. (!)
- Chives. 1213. *Schœnoprassum*, L. U. P.
Dr. A. B. Lyons; Gray's Manual.
- Wild Garlic. 1214. *Canadense*, Kalm. (***) C. & S.
Woods. Common.

JUNCACEÆ.

(Rush Family.)

LUZULA

- Wood-Rush. 1215. *pilosa*, Willd. Th.
Woods. Common.
- Wood-Rush. 1216. *parviflora*, Desv., var. *melanocarpa*, Gr. U. P.
Dr. A. B. Lyons.
- Wood-Rush. 1217. *campestris*, DC. C. & S.
Dry woods. Frequent.
- Wood-Rush. 1218. *spicata*, Desvaux. U. P.
Dr. A. B. Lyons.

JUNCUS

- Common or Soft Rush. 1219. *effusus*, L. Th.
Marshy grounds. Common.
- Rush, or Bog Rush. 1220. *filiformis*, L. Th.
Saginaw Bay—Winch. Cat.; L. Superior—Jno. Macoun.
- Bog Rush. 1221. *Balticus*, Dethard. Th.
Sandy shores. S. Haven—Bailey; to Petoskey (!); and northward.
- Bog Rush. 1222. *stygius*, L.
"N. shore of Lake Superior, Mr. Wheeler."—Gray's Manual.
- Bog Rush. 1223. *marginatus*, Rostk. S. Mich.—Winch. Cat.; Macomb Co.—Dr. D. Cooley.
- Bog Rush. 1224. *bufonius*, L. C. & S.
Roadsides. Common.

- Black-Grass. 1225. Gerardi, Loisel.
"Rare along the Great Lakes."—Gray's Man.
- Bog Rush. 1226. tenuis, Willd.
Low grounds. A tall form, 2½ feet high, grows at Muir; and Palo, Ionia Co.(!) Common.
- Bog Rush. 1227. Greenii, Oakes & Tuckerman.
Detroit(!) S. E.
- Bog Rush. 1228. Vaseyi, Engelm.
With the last. S. E.
- Bog Rush. 1229. pelocarpus, E. Meyer.
Bear Lake, Manistee Co.—E. J. Hill; Macomb Co.—Dr. D. Cooley. L. P.
- Bog Rush. 1230. articulatus, L.
S. Haven—Bailey; common at Petoskey(!); and northward. Th.
- Bog Rush. 1231. alpinus, Villars, var. insignis, Fries.
"Along the Great Lakes northward and westward."—Gray. U. P.
- Bog Rush. 1232. acuminatus, Michx., var. legitimus, Engelm.
Macomb Co.; Fruitport—E. J. Hill; Hubbardston(!). C. & S.
- Bog Rush. 1233. nodosus, L.
Gravelly banks. Th.
Common.
- Bog Rush. 1234. nodosus, L., var. megacephalus, Torr.
Montcalm Co.(!)
- Bog Rush. 1235. brachycarpus, Engelm.
Dr. Engelmann.
- Bog Rush. 1236. Canadensis, J. Gay, var. longicaudatus, Engelm.
Fruitport—E. J. Hill; Macomb Co.; Lansing. C. & S.
- Bog Rush. 1237. Canadensis, J. Gay, var. brachycephalus, Engelm.
Hubbardston(!).
- Bog Rush. 1238. Canadensis, J. Gay, var. coarctatus, Engelm.
Muir(!); Hubbardston(!); to L. Superior.

PONTEDERIACEÆ.

(Pickerel-weed Family.)

PONTEDERIA

- Pickerel-weed. 1239. cordata, L.
Borders of lakes and slow streams. Lakes in Oakland Co.(!); Ann Arbor; Ionia Co. (!); and northward. Th.

SCHOLLERA

- Water Star-grass. 1240. graminea, Willd.
Ann Arbor.—Allmend. Cat.; Dexter.—Dr. Elmore Palmer; Grand Rapids(!); Hubbardston(!). In streams. C. & S.
Common.

COMMELYNACEÆ.

(Spiderwort Family.)

COMMELYNA

- Day-flower. 1241. Virginica, L.
Wright Cat. S. W.

TRADESCANTIA

- Common Spiderwort. 1242. Virginica, L.
Moist woods. Ionia Co.(!); Grand Rapids(!); Ann Arbor.—Allmendinger Cat. Frequent. Often cultivated in the Eastern States. C. & S.

XYRIDACEÆ.

(Yellow-eyed Grass Family.)

XYRIS

Yellow-eyed
Grass.1243. *flexuosa*, Muhl.

Macomb Co.(!); S. W.—Wright Cat.

ERIOCAULONACEÆ.

(Pipewort Family.)

ERIOCAULON

Pipewort.

1244. *septangulare*, With.

S. W.—Wright Cat.; Macomb Co.

Infrequent.

CYPERACEÆ.

(Sedge Family.)

CYPERUS

Galingale.

1245. *flavescens*, L.

Grand Rapids.—Coleman Cat.; S. Mich.—Wright Cat.

Galingale.

1246. *diandrus*, Torr.

Low grounds.

C. & S.

Galingale.

1247. *erythrorhizos*, Muhl.

Macomb Co.—Dr. D. Cooley.

Galingale.

1248. *inflexus*, Muhl.

Coleman Cat.

Galingale.
Nut-grass.1249. *phymatodes*, Muhl.

A troublesome weed on low grounds, spreading rapidly by means of its nut-like tubers. Hard to eradicate. Muir (!); Flint; Grand Rapids, etc. Frequent.

C. & S.

Galingale.

1250. *strigosus*, L.

Low grounds.

C. & S.

Common.

Galingale.

1251. *Michauxianus*, Schultes.

Low grounds. Hubbardston (!); Flint, etc.

Common.

Galingale.

1252. *Engelmanni*, Steud.

Fruitport.—E. J. Hill.

Galingale.

1253. *Schweinitzii*, Torr.

Lake Michigan Shore at S. Haven,—Bailey.

S. W.

Galingale.

1254. *fliculmis*, Vahl.

Sterile soil.

C. & S.

Common.

KYLINGIA

Kyllingia.

1255. *pumila*, Michx.

Dr. Lyons.

S.

DULICHIMUM

Dulichium.

1256. *spathaceum*, Pers.

Borders of ponds and swamps.

Th.

Common.

FUIRENA

Umbrella
Grass.1257. *squarrosa*, Michx., var. *pumila*, Torr.

Macomb Co.—Dr. D. Cooley.

HEMICARPHA

- Hemicarpha. 1258. *subsquarrosa*, Nees.
S. W.—Wright Cat.

ELEOCHARIS

- Spike-rush. 1259. *equisetoides*, Torr.
S. E.—Wright Cat.
- Spike-rush. 1260. *quadrangulata*, R. Br. C. & S.
S. Mich.—Gray; Flint; border of Crystal Lake, Montcalm Co. (!). Rare.
- Spike-rush. 1261. *obtusa*, Shultes. C. & S.
Wet grounds. Common.
- Spike-rush. 1262. *palustris*, R. Br. Th.
Wet places. Common.
- Spike-rush. 1263. *rostellata*, Torr.
Marshes. Hubbardston (!); Macomb Co.; Drummond's L.—Winch. Cat.
Rare.
- Spike-rush. 1264. *intermedia*, Schultes.
Macomb Co.—Dr. D. Cooley; Grand Traverse Bay.—Winch. Cat.
- Spike-rush. 1265. *tenuis*, Schultes. C. & S.
S. E.—Wright Cat.; Hubbardston (!) Infrequent.
- Spike-rush. 1266. *acicularis*, R. Br.
Muddy shores. Common.
- Spike-rush. 1267. *pygmæa*, Torr. C.
Near salt springs. Flint; Maple River, Clinton Co. (!) Rare.

SCIRPUS

1268. *pauciflorus*, Lightfoot.
Michigan and northward.—Gray's Man.
1269. *cæspitosus*, L. U. P.
Dr. A. B. Lyons.
1270. *Clintonii*, Gray. C.
Bluffs along Fish Creek, Hubbardston (!); Flint—Dr. D. Clark. Rare.
1271. *planifolius*, Muhl. Rare.
Flint; Macomb Co.
1272. *subterminalis*, Torr. C. & S.
Houghton Lake (!); Woodard Lake, Ionia Co. (!); Flint; Macomb Co.; S. Mich.—Wr. Cat. Infrequent.
- Bulrush. 1273. *pungens*, Vahl. L. P.
Borders of ponds. Common.
- Bulrush. 1274. *Torreyi*, Olney.
Borders of ponds.—Gray.
- Bulrush. 1275. *validus*, Vahl. Th.
In still water. Common.
1276. *Smithii*, Gray.
Macomb Co.
- Sea Club Rush. 1277. *maritimus*, L. S. Mich.—Wright Cat.
- River Club Rush. 1278. *fluviatilis*, Gray. C. & S.
Margins of rivers. S. Mich.—Winch. Cat.; Macomb Co.; Hubbardston (!); abundant along Maple River.
1279. *atrovirens*, Muhl. Th.
Wet meadows. Common.
1280. *polyphyllus*, Vahl.
S. Mich.—Wright Cat.

- Bulrush. 1281. *lineatus*, Michx. C. & S.
River banks. S. Mich.—Winch. Cat.; Flint; Macomb Co.; Hubbardston (!).
Infrequent.
- Wool-grass. 1282. *Eriophorum*, Michx. Th.
Wet meadows. Frequent.

ERIOPHORUM

- Alpine Cotton-grass. 1283. *alpinum*, L. Th.
Mud Lake (!); Petoskey—E. J. Hill; Macomb Co. Infrequent.
- Sheathed Cotton-grass. 1284. *vaginatum*, L. Th.
Sphagnous swamps. S. Mich.—Winch. Cat.; Lansing—Baily; Macomb Co.; Hubbardston (!); Stanton (!); and northward. Rare.
- Virginian Cotton-grass. 1285. *Virginicum*, L. Th.
Sphagnous swamps. Ann Arbor—Allmend. Cat.; Flint; Hubbardston (!); northward. Infrequent.
- Many Stemmed Cotton-grass. 1286. *polystachyon*, L. L. P.
Swamps. Common.
- Graceful Cotton-grass. 1287. *gracile*, Koch. Th.
S. Mich.—Wright Cat.; Flint; Hubbardston (!); Montcalm Co. (!); and northward. Rare.

FIMBRISTYLIS

1288. *spadicea*, Vahl., var. *castanea*, Gr. S.
S. W.—Wright Cat.
1289. *autumnalis*, Røem. & Schultes.
S. Mich.—Wright Cat.
1290. *capillaris*, Gray.
S. Mich.—Winch. Cat.; Detroit (!).

RHYNCHOSPORA

- Beak Rush. 1291. *alba*, Vahl. L. P.
Bogs. Ann Arbor—Allmend. Cat.; Macomb Co.; Hubbardston (!); N. E.—Winch. Cat. Infrequent.
- Beak Rush. 1292. *capillacea*, Torr. Th.
Bogs and sandy lake shores. Hubbardston (!); Flint; Macomb Co.; Petoskey (!). Infrequent.
- Beak Rush. 1293. *capillacea*, Torr., var. *leviseta*, Hill.
Shore Grand Traverse Bay, near Torch Lake—E. J. Hill.
- Beak Rush. 1294. *glomerata*, Vahl.
S. Mich.—Wright Cat.; Macomb Co.

CLADIUM

- Twig Rush. 1295. *mariscoides*, Torr. C. & S.
Bogs. S. Mich.—Wright Cat.; Macomb Co.; Flint; Hubbardston (!).

SCLERIA

- Nut Rush. 1296. *triglomerata*, Michx. C. & S.
S. Mich.—Wright Cat.; Macomb Co.; Flint.
- Nut Rush. 1297. *verticillata*, Muhl.
Macomb Co.—Dr. D. Cooley.

CAREX

- Sedge. 1298. *gynocrates*, Wormskiold. U. P.
N. E. and N. W.—Winch. Cat.
- Sedge. 1299. *scirpoidea*, Michx.
N. E.—Winch. Cat.
- Sedge. 1300. *pauciflora*, Lightfoot. U. P.
U. P.—Dr. A. B. Lyons; Chocolate R., L. Superior—Henry Gillman.

| | | |
|--------|--|----------------------------|
| Sedge. | 1301. polytrichoides, Muhl. Low grounds. | Th. Common. |
| Sedge. | 1302. Willdenovii, Schk. Bear Lake, Van Buren Co.—E. J. Hill. | Rare. |
| Sedge. | 1303. Stendelii, Kunth. Dr. A. B. Lyons. | |
| Sedge. | 1304. Backii, Boott. Ontonagon River.—Whitney Cat. | U. P. |
| Sedge. | 1305. bromoides, Schk. Low grounds. | Th. Common. |
| Sedge. | 1306. siccata, Dew. Barrens. Macomb Co.; Flint; Hubbardston(!). | C. Infrequent. |
| Sedge. | 1307. disticha, Huds. S. Mich.—Winch. Cat.; Macomb Co.; Flint, Hubbardston(!) and northward. | Th. |
| Sedge. | 1308. teretiuscula, Good. Swamps. | Th. Common. |
| Sedge. | 1309. teretiuscula, var. major, Koch. Hubbardston(!). | |
| Sedge. | 1310. decomposita, Muhl. Hubbardston(!); Ann Arbor.—Allmendinger Cat.; S. Mich.; Wright Cat. | Very rare. |
| Sedge. | 1311. vulpinoidea, Michx. Low meadows. | Th. Common. |
| Sedge. | 1312. Nuttallii, Schw. Dr. A. B. Lyons. | |
| Sedge. | 1313. stipata, Muhl. Low grounds. | Th. Common. |
| Sedge. | 1314. conjuncta, Boott. Flint.—Dr. D. Clark. Hubbardston(!). | Infrequent. |
| Sedge. | 1315. alopecoidea, Tuckerman. Macomb Co.; Gray's Man. | |
| Sedge. | 1316. muricata, L. Macomb Co.—Dr. D. Cooley. | |
| Sedge. | 1317. sparganioides, Muhl. Low, rich grounds. | C. & S. Frequent. |
| Sedge. | 1318. cephaloidea, Dew. & Boott. Fields. Macomb Co.—Cooley; Ann Arbor.—Allmend. Cat. | C. & S. |
| Sedge. | 1319. cephalophora, Muhl. Open woods. | C. & S. Common. |
| Sedge. | 1320. Muhlenbergii, Schk. Fields. Hubbardston (!); Macomb Co. | C. & S. Infrequent. |
| Sedge. | 1321. rosea, Schk. Moist woods. | Frequent. |
| Sedge. | 1322. rosea, Schk., var. retroflexa, Olney. Dr. A. B. Lyons. | |
| Sedge. | 1323. chordorhiza, Ehrh. Upland swamps. Macomb Co.; Hubbardston (!); Stanton, Montcalm Co. (!). | Th. Rare. |
| Sedge. | 1324. tenella, Schk. S. E.—Wright Cat.; Macomb Co.; Flint; Hubbardston (!); Petoskey; and northward. | Th. |
| Sedge. | 1325. trisperma, Dew. Upland swamps. Hubbardston (!); Flint; Macomb Co.; and northward. | C. N. & U. P. Frequent. |

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| Sedge. | 1326. <i>tenuiflora</i> , Wahl. Macomb Co.; U. P.—Whitney Cat. | |
| Sedge. | 1327. <i>canescens</i> , L. S. Mich.—Wright Cat.; Hubbardston (!); Flint; Macomb Co.; and northward. Swamps. | Th. Frequent. |
| Sedge. | 1328. <i>vitis</i> , Fries. Hubbardston (!); Flint, etc. | Th. Infrequent. |
| Sedge. | 1329. <i>Deweyana</i> , Schw. Woods. | Th. Frequent. |
| Sedge. | 1330. <i>sterilis</i> , Willd. S. Mich.—Winch. Cat.; Hubbardston (!); Flint; Macomb Co.; and northward. | Th. |
| Sedge. | 1331. <i>stellulata</i> , L. S. E.—Wright Cat.; Hubbardston (!); Flint; Macomb Co.; and northward | Th. |
| Sedge. | 1332. <i>syncephala</i> , Carey. Crystal, Montcalm Co. (!); the only known station in the State. | |
| Sedge. | 1333. <i>Muskingumensis</i> , Schw. Borders of a marsh in Ronald, Ionia Co. (!); Flint. | |
| Sedge. | 1334. <i>scoparia</i> , Schk. Low grounds, everywhere. | |
| Sedge. | 1335. <i>lagopodioides</i> , Schk. Moist shady places. | Common. |
| Sedge. | 1336. <i>lagopodioides</i> , Schk., var. <i>cristata</i> , Carey, Low grounds. | C. & S. Common. |
| Sedge. | 1337. <i>lagopodioides</i> , Schk., var. <i>mirabilis</i> , Olney. With the last. | Common. |
| Sedge. | 1338. <i>albalutescens</i> , Schw. Hubbardston (!). | |
| Sedge. | 1339. <i>straminea</i> , Schk., var. <i>typica</i> , Boott. Ann Arbor,—Allmendinger Cat.; Flint. | |
| Sedge. | 1340. <i>straminea</i> , Schk., var. <i>festuacea</i> , Boott. S. Mich.—Winch. Cat.; Macomb Co.; Flint; Hubbardston (!). | Infrequent. |
| Sedge. | 1341. <i>tenera</i> , Dewey. Ann Arbor.—Allmendinger Cat.; Macomb Co.; Flint; Hubbardston (!) | Frequent. |
| Sedge. | 1342. <i>tenera</i> , Dewey, var. <i>major</i> , Olney. Hubbardston (!). | |
| Sedge. | 1343. <i>vulgaris</i> , Fries. S. Mich.—Wright Cat.; Coleman Cat. | |
| Sedge. | 1344. <i>aquatis</i> , Wahl. Margins of streams. S. Mich.—Wright Cat.; Flint; Macomb Co. Hubbardston (!); Sitting Rabbit—Winch. Cat. | Th. Infrequent. |
| Sedge. | 1345. <i>torta</i> , Boott. (?) | |
| Sedge. | 1346. <i>stricta</i> , Lam. Low grounds. | Th. Common. |
| Sedge. | 1347. <i>lenticularis</i> , Michx. "Upper Michigan,"—Gray; Laughing Fish R., L. Superior—Henry Gillman. | U. P. |
| Sedge. | 1348. <i>crinita</i> , Lam. Low grounds. | Th. Common. |
| edge. | 1349. <i>gynandra</i> , Schw., Boott. Dr. Gray. | |

- Sedge. 1350. *limosa*, L. Th.
Bogs. Ann Arbor—Allmend. Cat.; Macomb Co.; Hubbardston(!); and northward. Infrequent.
- Sedge. 1351. *irrigua*, Smith. C., N. & U. P.
Sphagnous swamps. Macomb Co.; Isabella Co.(!) Rare.
- Sedge. 1352. *Buxbaumii*, Wahl. Th.
Bogs. S. E.—Winch. Cat.; Lansing—Bailey; Macomb Co.; Hubbardston(!); northward to L. Superior—Whitney Cat.
- Sedge. 1353. *alpina*, Schw. U. P.
Isle Royale—Whitney Cat.
- Sedge. 1354. *aurea*, Nutt. Th.
Borders of cool springs. S. E.—Wright Cat.; Ann Arbor—Allmend. Cat.; Macomb Co.; Hubbardston(!); Petoskey(!); and northward. Infrequent.
- Sedge. 1355. *livida*, Willd. (?)
- Sedge. 1356. *panicea*, L., var. *refracta*, Olney. U. P.
"Lake Superior (*Robbins* and *Porter*) and northward."—Gray.
- Sedge. 1357. *panicea*, L., var. *Meadii*, Olney. C. & S.
Macomb Co.; Hubbardston(!).
- Sedge. 1358. *panicea*, L., var. *tetanica*, Olney. C. & S.
S. Mich.—Winch. Cat.; Macomb Co.; Flint; Hubbardston(!).
- Sedge. 1359. *microdonta*, Torr. Rare.
N. Mich.—Winch. Cat.; Macomb Co.
- Sedge. 1360. *Haleana*, Olney.
Banks of Fish creek, Hubbardston(!).
- Sedge. 1361. *granularis*, Muhl. Th.
Low grounds. Common.
- Sedge. 1362. *Torreyi*, Tuckerman. U. P.
Dr. A. B. Lyons.
- Sedge. 1363. *pallesceus*, L.
Dr. A. B. Lyons.
- Sedge. 1364. *conoidea*, Schk. C. & S.
S. E.—Wright Cat.; Flint. Infrequent.
- Sedge. 1365. *grisea*, Wahl.
Moist woods. Hubbardston(!); Flint; Drummond's I.—Winch. Cat.; to Lake Superior—Whitney Cat. Frequent.
- Sedge. 1366. *Davisii*, Schw. & Torr.
Sitting Rabbit—Winch. Cat.
- Sedge. 1367. *formosa*, Dew. C. & S.
S. Mich.—Winch. Cat.; Macomb Co.
- Sedge. 1368. *gracillima*, Schk. Th.
Wet meadows. Common.
- Sedge. 1369. *virescens*, Muhl. S.
S. Mich.—Winch. Cat.; Detroit(!).
- Sedge. 1370. *triceps*, Michx.
In an oak wood on the farm of Hon. N. B. Hayes, in North Plains township, Ionia Co.(!); not known to occur elsewhere in the State.
- Sedge. 1371. *plantaginica*, Lam. Th.
Hillsides. Scarce.
- Sedge. 1372. *Careyana*, Torr. C.
Rich woods. Macomb Co.; Flint; Hubbardston (!). Rare.
- Sedge. 1373. *platyphylla*, Carey. C.
Grand Rapids—Coleman's Cat.; Hubbardston (!). Infrequent.
- Sedge. 1374. *retrocurva*, Dew. C.
Flint; Hubbardston (!). Infrequent.

- Sedge. 1375. *digitalis*, Willd. C.
Macomb Co.; Flint; Hubbardston (!).
- Sedge. 1376. *laxiflora*, Lam. Common.
Beech and maple woods. Exceedingly variable. Many forms occur.
- Sedge. 1377. *oligocarpa*, Schk. C.
Flint; Macomb Co.—Dr. D. Cooley.
- Sedge. 1378. *Hitchcockiana*, Dew. C.
Woods. Flint; Hubbardston (!).
- Sedge. 1379. *eburnea*, Boott. Th.
Hillsides. Frequent.
- Sedge. 1380. *pedunculata*, Muhl. C. & S.
Hillsides. Frequent.
- Sedge. 1381. *umbellata*, Schk. Rare.
Flint—Dr. D. Clark.
- Sedge. 1382. *Novæ-Angliæ*, Schw. S. E.—Wright Cat.
- Sedge. 1383. *Emmonsii*, Dew. Grand Traverse—Winch. Cat.
- Sedge. 1384. *Pennsylvanica*, Lam. C. & S.
Dry woods. Common.
- Sedge. 1385. *varia*, Muhl. Th.
With the last. Macomb Co.; Hubbardston (!). Scarce.
- Sedge. 1386. *Richardsonii*, R. Br. Scarce.
Barrens. Ionia Co. (!); Macomb Co.
- Sedge. 1387. *pubescens*, Muhl. C. & S.
S. Mich.—Wright Cat.; Macomb Co.; Hubbardston (!) to Lake Superior—Whitney Cat. Frequent.
- Sedge. 1388. *miliacea*, Muhl. C. & S.
Wet meadows. S. Mich.—Winch Cat; Flint. Frequent.
- Sedge. 1389. *Scabrata*, Schw. Th.
Banks of streams. Flint; Grand Rapids—Coleman Cat.; Hubbardston (!), to Lake Superior—Whitney Cat. Infrequent.
- Sedge. 1390. *arctata*, Boott. Th.
Woods. S. Mich.—Winch. Cat; Petoskey (!). Infrequent.
- Sedge. 1391. *debilis*, Michx. Bear Lake, Van Buren Co.—E. J. Hill.
- Sedge. 1392. *capillaris*, L. U. P.
Point de Tour, Lake Michigan—Gray.
- Sedge. 1393. *flexilis*, Rudge. Th.
Woods. Montcalm Co. (!); Macomb Co.; L. Superior—Whitney Cat. Rare.
- Sedge. 1394. *flava*, L. Th.
Sphagnous swamps. S. E.—Wright Cat.; Montcalm Co.; Hubbardston (!); Petoskey (!); and northward. Frequent.
- Sedge. 1395. *Cederi*, Ehrh. Th.
Margins of lakes. Oakland Co. (!); Flint; Petoskey (!); Drummond's I.—Winch. Cat.
- Sedge. 1396. *filiformis*, L. Rare.
Bogs. S. Mich.—Wright Cat.; Hubbardston (!); Macomb Co.; Flint.
- Sedge. 1397. *lanuginosa*, Michx. River banks. S. E.—Winch. Cat.; Macomb Co.; Flint; Hubbardston (!); and northward. Scarce.
- Sedge. 1398. *Houghtonii*, Torr. N. part of Clare Co. (!). Only station known in the State.

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| Sedge. | 1399. <i>riparia</i> , Curtis. | C. & S. |
| | Wet places. | Common. |
| Sedge. | 1400. <i>aristata</i> , R. Br. | |
| | "Lake shores and river banks."—Gray's Manual. | |
| Sedge. | 1401. <i>trichocarpa</i> , Muhl. | C. & S. |
| | S. Mich.—Wright Cat.; Macomb Co. | Infrequent. |
| Sedge. | 1402. <i>comosa</i> , Boott. | C. & S. |
| | Wet places. | Common. |
| Sedge. | 1403. <i>Pseudo-Cyperus</i> , L. | |
| | Margins of streams. S. Mich.—Wright Cat.; Macomb Co.; Hubbardston (!). | Infrequent. |
| Sedge. | 1404. <i>hystericina</i> , Willd. | Th. |
| | Wet meadows. | Common. |
| Sedge. | 1405. <i>tentaculata</i> , Muhl. | L. P. |
| | Antrim Co.; S. Mich.—Wright Cat. | |
| Sedge. | 1406. <i>intumescens</i> , Rudge. | Th. |
| | Swamps. | Common. |
| Sedge. | 1407. <i>Grayii</i> , Carey. | |
| | Low grounds. Macomb Co.; Flint; Hubbardston (!). | Rare. |
| Sedge. | 1408. <i>lupulina</i> , Muhl. | C. & S. |
| | Low grounds. | Common. |
| Sedge. | 1409. <i>lupuliformis</i> , Sartwell. | |
| | Macomb Co. | |
| Sedge. | 1410. <i>folliculata</i> , L. | |
| | S. Mich.—Wright Cat.; Flint; Macomb Co.; to L. Superior. | |
| Sedge. | 1411. <i>rostrata</i> , Michx. (?) | |
| Sedge. | 1412. <i>subulata</i> , Michx. (?) | |
| Sedge. | 1413. <i>squarrosa</i> , L. | C. & S. |
| | S. Mich.—Wright Cat.; Hubbardston (!); | Rare. |
| Sedge. | 1414. <i>retrorsa</i> , Schw. | Th. |
| | River banks. | Frequent. |
| Sedge. | 1415. <i>utriculata</i> , Boott. | Th. |
| | Swamps. | Common. |
| Sedge. | 1416. <i>monile</i> , Tuckerman. | N. |
| | Mud Lake, Petoskey—E. J. Hill. | |
| Sedge. | 1417. <i>Tuckermani</i> , Boott. | |
| | Swamps. S. Mich.—Wright Cat.; Hubbardston (!); Flint; Macomb Co.; and northward. | Frequent. |
| Sedge. | 1418. <i>bullata</i> , Schk. | |
| | Macomb Co.; Flint. | |
| Sedge. | 1419. <i>oligosperma</i> , Michx. | C. |
| | Borders of swamps and lakes. Hubbardston (!); Woodard Lake (!); Farwell (!); Houghton Lake (!). | |
| Sedge. | 1420. <i>longirostris</i> , Torr. | |
| | Woods. Flint; Hubbardston (!). | Rare. |

GRAMINEÆ.

(Grass Family.)

| | | |
|--------------|---------------------------------|-----------|
| LEERSIA | | |
| White Grass. | 1421. <i>Virginica</i> , Willd. | C. & S. |
| | Wet woods. | Frequent. |

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| Rice Cut-grass. | 1422. <i>oryzoides</i> , Swartz. | C. & S. Frequent. |
| | River banks. | |

ZIZANIA

| | | |
|-----------------------------|--|-----|
| Indian Rice. Water-oats. | 1423. <i>aquatica</i> , L. | Th. |
| | Borders of large streams and lakes. Wright Cat.; South Haven—Bailey; Montcalm Co.; Hubbardston (!); and northward. Yields an edible grain, formerly gathered by the Indians, and now greedily eaten by wild ducks which haunt lakes and rivers during its ripening in innumerable numbers. | |
| | 1424. <i>miliacea</i> , Michx. | |
| | Grand Ledge.—Prof. W. J. Beal. | |

ALOPECURUS

| | | |
|--------------------|--|-----------|
| Meadow Fox-tail. | 1425. <i>pratensis</i> , L. | |
| | L. Superior—Whitney Cat. | |
| Floating Fox-tail. | 1426. <i>geniculatus</i> , L. | |
| | S. Mich.—Wright Cat.; Macomb Co. | |
| Wild Foxtail. | 1427. <i>aristulatus</i> , Michx. | |
| | In water. Lansing—Bailey; Hubbardston (!); Flint; and northward. | Frequent. |

PHLEUM

| | | |
|---------------------------|---|--|
| Timothy. Herd's Grass. | 1428. <i>pratense</i> , L. | |
| | Meadows everywhere. Cultivated for hay. | |
| | 1429. <i>alpinum</i> , L. | |
| | L. Superior—Whitney Cat. | |

VILFA

| | | |
|-------------|----------------------------------|--|
| Rush Grass. | 1430. <i>aspera</i> , Beauv. | |
| | Dr. Lyons. | |
| Rush Grass. | 1431. <i>vaginæflora</i> , Torr. | |
| | Dr. Lyons; Flint. | |

SPOROBOLUS

| | | |
|------------------|----------------------------------|--|
| Drop-seed Grass. | 1432. <i>juncus</i> , Kunth. | |
| | Dr. Lyons. | |
| Drop-seed Grass. | 1433. <i>cryptandrus</i> , Gray. | |
| | S. Mich.—Winch. Cat. | |
| Drop-seed Grass. | 1434. <i>serotinus</i> , Gray. | |
| | Sandy wet places—Gray's Manual. | |

AGROSTIS

| | | |
|------------------------------|---|-----------|
| Thin Grass. | 1435. <i>perennans</i> , Tuckerman. | |
| | Swamps. S. Mich.—Wright; Macomb Co.; Hubbardston (!). | Frequent. |
| Hair Grass. | 1436. <i>scabra</i> , Willd. | Th. |
| | Sterile soil. | Common. |
| Brown Bent-grass. | 1437. <i>canina</i> , L. | |
| | Ann Arbor—Winch. Cat. | |
| Red-top. | 1438. <i>vulgaris</i> , With. | |
| | Low meadows everywhere. Naturalized from Europe. | |
| Florin. White Bent-grass. | 1439. <i>alba</i> , L. | Th. |
| | With the last, along river banks. Naturalized from Europe. This and the preceding are thought by some authors to be indigenous. | |

CINNA

| | | |
|------------------|-------------------------------|-----------|
| Wood Reed-grass. | 1440. <i>arundinacea</i> , L. | Th. |
| | Low Grounds. | Frequent. |

- Wood Reed-grass. 1441. *arundinacea*, L., var. *pendula*, Gray. N. & U. P.
Petoskey (!); L. Superior—Whitney Cat.
- MUHLENBERGIA
- Drop-seed Grass. 1442. *sobolifera*, Trin.
Open rocky woods, Michigan—Gray.
- Drop-seed Grass. 1443. *glomerata*, Trin. Th.
Marshes. Used for forage in Dakota, but too coarse to be of value where anything else is attainable. Frequent.
1444. *Mexicana*, Trin. C. & S.
Low grounds. Common.
1445. *sylvatica*, Torr. and Gray. Frequent.
Hubbardston (!); Flint; Lansing—Bailey.
1446. *Willdenovii*, Trin. C. & S.
Woods. Flint; Macomb Co.; S. Mich.—Wright Cat.
- Nimble Will. 1447. *diffusa*, Schreber. C. & S.
Open woods, and becoming frequent around dwellings. S. Mich.—Wright Cat.; So. Haven—Bailey; Lansing (!); Flint; Hubbardston (!).
- BRACHYELYTRUM
1448. *aristatum*, Beauv. Th.
Woods. Frequent.
- CALAMAGROSTIS
- Blue Joint. 1449. *Canadensis*, Beauv.
This is a very valuable grass to the lake settlers (U. P.), rarely of many acres in extent. It is cut and stacked in August, and in winter is hauled home by sled or dog-train. It is said to be greedily eaten by the cattle and to be as nourishing as herd's grass [?]. It grows shoulder-high, so that even a small meadow furnishes a great store of hay—Whitney Cat., in 1851.
1450. *Langsdorffii*, Trin.
Flint—Dr. D. Clark.
1451. *stricta*, Trin. Th.
Flint—Dr. D. Clark; and northward to L. Superior—Gray. Rare.
1452. *confinis*, Nutt.
Flint—Dr. D. Clark.
- Reed Bent-grass. 1453. *Nuttalliana*, Steud.
S. Mich.—Wright Cat.
1454. *longifolia*, Hook. Th.
Sand dunes along L. Michigan. S. Haven—Bailey; Petoskey (!); Point au Chene—Winch. Cat.
- Sea Sand-reed. 1455. *arenaria*, Roth. N. & U. P.
This is one of the few plants found both on the ocean and Great Lake shores. Petoskey (!); Point au Chene—Winch. Cat.
- ORYZOPSIS
- Mountain Rice. 1456. *melanocarpa*, Muhl. C. & S.
Woods. S. Mich.—Wright Cat.; S. Haven and Lansing—Bailey; Macomb Co.; Flint; Hubbardston (!). Infrequent.
- Mountain Rice. 1457. *asperifolia*, Michx. Th.
Hillsides. Common.
- Mountain Rice. 1458. *Canadensis*, Torr.
Sterile soil. S. E.—Wright Cat.; Hubbardston (!); Montcalm Co. (!); Macomb Co.; Common in Clare Co (!); frequent from Ionia northward.
- STIPA
- Black Oat Grass. 1459. *avenacea*, L.
S. W.—Wright Cat.; South Haven—Bailey.

- Porcupine Grass. 1460. *spartea*, Trin., not of Hook. Th.
 Dry plains. S. Mich.—Wright Cat.; Lansing—Bailey; Macomb Co.; shore of Woodard Lake, Ionia Co. (!); hills along Grand R. near Ionia.

ARISTIDA

- Triple-awned Grass. 1461. *purpurascens*, Poir. Infrequent.
 S. Mich.—Winch. Cat.; Flint; Macomb Co.

SPARTINA

- Fresh-water Cord-Grass. 1462. *cynosuroides*, Willd. C. & S.
 Banks of rivers. Frequent.

BOUTELOUA

- Muskit-Grass. 1463. *curtipendula*, Gray. S.
 Dry plains. S. Mich.—Wright Cat.; Macomb Co. Infrequent.

ELEUSINE

- Dog's-tail or Wire-Grass. 1464. *Indica*, Gærtn.
 Ionia Co. (!); Lansing and South Haven—Bailey; S. Mich.—Wright Cat.

TRICUSPIS

- Tall Red-top. 1465. *seslerioides*, Torr. S.
 S. Mich.—Wright Cat.

GRAPHEPHORUM

1466. *melicoides*, Beauv. Th.
 River banks, Macomb Co.; Flint; Hubbardston (!); Petoskey (!); Grand Detour, Upper Michigan.—Prof. Porter.
 1467. *melicoides*, Beauv., var. *major*, Gray.
 Montcalm Co. (!); Macomb Co.

DIARRHENA

- Diarrhena. 1468. *Americana*, Beauv. S.
 S. Mich.—Wright Cat.; Flint; Hubbardston (!). Reaches its northern limit in Ionia Co. Rare.

DACTYLIS

- Orchard Grass. 1469. *glomerata*, L.
 A valuable grass for pasture and hay; becoming naturalized.

KÆLERIA

- Kæleria. 1470. *cristata*, Pers. Th.
 Dry hills. Frequent.

EATONIA

- Eatonia. 1471. *obtusata*, Gray. Rare.
 S. E.—Wright Cat.; Flint; Hubbardston (!).
 Eatonia. 1472. *Pennsylvanica*, Gray. Th.
 Moist woods. Common.
 Eatonia. 1473. *Pennsylvanica*, Gray, var. *major*, Torr.
 Flint; spikelets purplish-tinged at Petoskey (!).

MELICA

- Melic-Grass. 1474. *mutica*, Walt.
 Macomb Co.—Dr. D. Cooley.

GLYCERIA

- Rattlesnake-Grass. 1475. *Canadensis*, Trin.
 Borders of marshes. S. W.—Winch. Cat.; Flint; Ionia Co. (!)

1476. *elongata*, Trin.
Wet woods—Gray; Flint—Dr. Clark.
1477. *nervata*, Trin. Th.
Low meadows Common.
1478. *pallida*, Trin.
Shallow water. Macomb Co.; Flint; Hubbardston (!); and northward.
1479. *aquatica*, Smith. Th.
Wet grounds. Common.
1480. *fluitans*, R. Br. Th.
Shallow water. Common.
1481. *acutiflora*, Torr.
Flint—Dr. D. Clark.

POA

- Low Spear-Grass. 1482. *annua*, L. Th.
Low grounds. Common.
- Wire-Grass. 1483. *compressa*, L. Th.
Dry fields. Nutritious and would make good hay if it could be grown in quantity. Common.
1484. *alpina*, L. U. P.
Isle Royale—C. G. Loring, Jr., in Gray's Manual.
1485. *cæsia*, Smith, Th.
Flint; Petoskey (!); and northward.
1486. *cæsia*, Smith, var. *strictior*, Gr.
Petoskey (!); Isle Royale—C. G. Loring, Jr., in Gray's Manual.
- False Red-top. 1487. *serotina*, Ehrh. Th.
Fowl Meadow-Grass. Wet meadows, where it is a valuable grass—sometimes mistaken for Red-top, *Agrostis vulgaris*. Common.
- Kentucky Blue-Grass. 1488. *pratensis*, L. Th.
June-Grass. Pastures and meadows. Our most valuable pasture grass; not of much value for hay. Blossoms in June.
- Roughish Meadow-Grass. 1489. *trivialis*, L.
S. Mich.—Wright Cat.; Flint.
1490. *sylvestris*, Gray. C. & S.
Low woods. S. Mich.—Winch. Cat.; Flint; Hubbardston (!). Rare.
1491. *debilis*, Torr. C. & S.
Hillsides. S. Mich.—Winch. Cat.; Macomb Co.; Hubbardston (!). Frequent.
1492. *alsodes*, Gray. C. & S.
Banks of streams. Flint; Hubbardston (!); etc. Infrequent.
1493. *flexuosa*, Muhl. Rare.
Flint—Dr. D. Clark; Hubbardston (!).

ERAGROSTIS

- Eragrostis. 1494. *reptans*, Nees. C. & S.
Gravelly borders of streams. Common.
- Eragrostis. 1495. *poaeoides*, Beauv., var. *megastachya*, Gr. C. & S.
Waste places and gardens,—a common weed. The sp. does not occur. Common.
- Eragrostis. 1496. *pilosa*, Beauv. S.
Grand Rapids—Coleman's Cat.; Macomb Co.
- Eragrostis. 1497. *Frankii*, Meyer.
Roadsides in low ground. Lansing (!); Hubbardston (!); Gratiot Co. (!), etc. Frequent.

- Eragrostis. 1498. *capillaris*, Nees.
Coleman's Cat.; S. Mich.—Wright Cat.; Prof. M. W. Harrington.
- Eragrostis. 1499. *pectinacea*, Gray. C. & S.
Dry sandy ground. S. Mich.—Wright Cat. Reaches its northern limits at
Muir, Ionia Co. (!). Infrequent.

FESTUCA

- Fescue-Grass. 1500. *tenella*, Willd. L. P.
Dry grounds. Common in the center of the State; N. to Petoskey (!).
- Sheep's Fescue. 1501. *ovina*, Gray. Th.
Dry ground. Common.
- Sheep's Fescue. 1502. *ovina*, Gray, var. *duriuscula*, Gray.
S. Mich.—Wright Cat.; Petoskey (!).
- Sheep's Fescue. 1503. *ovina*, Gray, var. *rubra*, Gray.
"Lake Superior, Dr. Robbins."—Gray's Manual.
- Meadow Fescue. 1504. *elatior*, L.
Meadows. Flint.
- Meadow Fescue. 1505. *elatior*, L., *pratensis*, Gray.
Kalamazoo—Tuthill; Hubbardston (!).
- Nodding Fescue. 1506. *nutans*, Willd. L. P.
Woods. Frequent.

BROMUS

- Cheat or Chess. 1507. *secalinus*, L. Th.
Fields. Too common in wheat fields. There is a wide-spread notion, among farmers, that wheat changes or degenerates into this grass. It is needless to say that it is wholly without foundation. Often as many as thirty well-developed stalks grow from a single grain in rich soil, each stalk maturing a hundred grains or more. It is perhaps the worst intruder in our wheat fields, from the fact that its grain is about the size of the wheat kernel, and not easily separated from it. This grass seldom troubles the better class of farmers.
- Upright Chess. 1508. *racemosus*, L.
Flint—Dr. D. Clark.
- Wild Chess. 1509. *Kalmii*, Gray. C. & S.
Dry, open woods. S. E.—Wright Cat.; Flint; Macomb Co.; Hubbardston (!).
1510. *ciliatus*, L. Th.
Moist woods. We have several forms; the most peculiar of which is found growing on low sand dunes at the head of Little Traverse Bay (!).

PHRAGMITES

- Reed. 1511. *communis*, Trin. L. P.
Swamps. From S. Mich.—Wright Cat.; Chandler marsh, Lansing (!); Maple River (!), etc.; to Crooked Lake, Emmet Co. (!). Infrequent.

LOLIUM

- Common Darnel. 1512. *perenne*, L.
Macomb Co.—Dr. Cooley; Ionia Co. (!), etc. Scarcely naturalized.
- Bearded Darnel. 1513. *temulentum*, L. (***)
Scarcely naturalized. Flint; Macomb Co.; S. Mich.—Wright Cat.

TRITICUM.

- Couch, Quitch, Quick, or Quack Grass. 1514. *repens*, L. (***) Th.
Cultivated grounds. Varies greatly. Sometimes grows to the exclusion of everything else, but not wide-spread enough to be considered a pest.
1515. *repens*, L., var. *nemorale*, Anders.
Petoskey—E. J. Hill.

1516. *dasystachium*, Gray. N. & U. P.
Common at Petoskey (!); N. W.—Winch. Cat.
1517. *violaceum*, Horneman. Th.
Flint; Hubbardston (!); Petoskey (!).
- Awne
Wheat-Grass. 1518. *caninum*, L. Th.
S. Mich.—Winch. Cat.; Macomb Co.; Hubbardston (!).

HORDEUM

- Squirrel-tail
Grass. 1519. *jubatum*, L. S. W.
Sands. Common.

ELYMUS

- Lyme Grass.
Wild Rye. 1520. *Virginicus*, L. Th.
River banks. Common.
- Wild Rye. 1521. *Canadensis*, L. Th.
River banks. Common.
- Wild Rye. 1522. *Canadensis*, L., var. *glaucofolius*, Gray.
Ionia Co. (!); Ingham Co. (!), etc. Specimens from banks of Red Cedar
River, Lansing, measured six feet, with leaves one inch wide.
- Wild Rye. 1523. *Sibiricus*, L. U. P.
S. shore of L. Superior—Porter in Gray's Manual.
- Wild Rye. 1524. *striatus*, Willd. Th.
S. Mich.—Wright Cat.; Flint; Hubbardston (!); northward to L. Superior.
- Wild Rye. 1525. *mollis*, Trin. Shores of the Great Lakes—Gray's Manual.

GYMNOSTICHUM

- Bottle-brush
Grass. 1526. *Hystrix*, Schreb. Th.
Moist woods. A variety of this grass is found in one locality near Hub-
bardston with smooth and very glaucous culms, leaves rough, hairy.

DANTHONIA

- Wild Oat-
Grass. 1527. *spicata*, Beauv. Th.
Sterile soil. Frequent.

AVENA

- Oat. 1528. *striata*, Michx. C. & S.
S. E.—Wright Cat.; Macomb Co.; Flint; Hubbardston (!).
1529. *Smithii*, T. C. Porter. U. P.
Isle Royale, Keweenaw Point—Dr. Robbins in Gray's Man.; and woods
near Sault Ste. Marie—C. E. Smith.

TRisetum

- Trisetum. 1530. *subspicatum*, Beauv., var. *molle*, Gray. U. P.
Whitney Cat.
- Common Hair-
Grass. 1531. *flexuosa*, L. Infrequent.
Dry places.
- Hair-Grass. 1532. *cæspitosa*, L. Th.
Bogs. S. Mich.—Wright Cat.; Flint; Hubbardston (!); Petoskey (!).
Frequent.

ARRHENATHERUM

- Oat-Grass. 1533. *avenaceum*, Beauv.
Macomb Co., etc. Escaped from culture.

HIEROCHLOA

- Vanilla or Sen-
eca-Grass. 1534. *borealis*, Rœm. & Schultes.
Not confined to the shores of the Great Lakes; found in the central part
of the State at Ionia (!); Hubbardston (!); Macomb Co.; Flint; S. E.—
Winch. Cat., etc. Common.

ANTHOXANTHUM

- Sweet Vernal-Grass. 1535. *odoratum*, L. Rare.
 Ionia (!); Grand Rapids—Coleman Cat.; Petoskey (!).

PHALARIS

- Reed Canary-Grass. 1536. *arundinacea*, L. Th.
 Borders of streams. Rare in L. P. "Var. *picta*, the leaves striped with white, is the familiar ribbon-grass of the garden."—Gray's Manual. Lansing—Bailey; Ann Arbor—Prof. M. W. Harrington; S. Mich.—Winch Cat.; Macomb Co.; Flint; Hubbardston (!); northward to L. Superior—Whitney Cat. Infrequent.

MILIUM

- Millet-Grass. 1537. *effusum*, L. Th.
 Woods. Frequent.

PANICUM

- Panic-Grass. 1538. *filiforme*, L.
 S. W.—Wright Cat.
 1539. *glabrum*, Gaudin.
 Waste places. Common.
 Common Crab or Finger Grass. 1540. *sanguinale*, L.
 Waste places, gardens, and fields. A bad weed, difficult to dig up or pull out; grows quickly and is perhaps the worst weed we have in gardens at least in some localities. *P. glabrum* grows in the same situations but is smaller and easily eradicated.
 Old-witch Grass. 1541. *capillare*, L.
 Sandy soil, fields. The spreading panicle is easily broken off and blown about by the wind. Common.
 Panic-Grass. 1542. *virgatum*, L.
 S. Mich.—Wright Cat.; and northward to Ionia (!); Flint. A tall coarse grass along rivers. Infrequent.
 Panic-Grass. 1543. *latifolium*, L. C. & S.
 Rich woods. Common.
 Panic-Grass. 1544. *clandestinum*, L.
 Low grounds. Macomb Co.; Lansing (!), Flint (!), Hubbardston (!). Rare.
 Panic-Grass. 1545. *microcarpon*, Muhl.
 Gray's Manual.
 Panic-Grass. 1546. *pauciflorum*, Ell.
 Hubbardston (!). Along the R. R. between St. Johns and Muir (!).
 Panic-Grass. 1547. *dichotomum*, L. Th.
 Dry or low grounds. A very common and exceedingly variable grass. Some forms seem distinct enough to be considered species.
 Panic-Grass. 1548. *depauperatum*, Muhl. Th.
 Dry woods and barrens. Common.
 Barnyard-Grass. 1549. *Crus-galli*, L. Common.
 Low grounds. Variable.
 1550. *Crus-galli*, L., var. *hispidum*, Gray.
 In swamps, where it seems indigenous. Common.

SETARIA

1551. *verticillata*, Beauv.
 Lansing, College grounds.
 Foxtail. 1552. *glauca*, Beauv. Common.
 Fields and gardens.
 Pigeon-Grass. 1553. *viridis*, Beauv. Common.
 Green Foxtail. Cultivated grounds.
 Bottle-Grass. Common.

- Millet.
Bengal-Grass. 1554. *Italica*, Kunth.
Remaining after cultivation.

Adv.

CENCHRUS

- Bur-Grass. 1555. *tribuloides*, L.

This bad weed has begun to occupy the S. part of the State, not having been reported N. of Grand Rapids (!). Not as yet troublesome in fields, but likely to become so on sandy farms along the Great Lakes.

ANDROPOGON

- Beard-Grass. 1556. *furcatus*, Muhl.
Light soil.

C. & S.
Common.

- Beard-Grass. 1557. *scoparius*, Mx.
Sterile soil.

C. & S.
Frequent.

- Beard-Grass. 1558. *Virginicus*, L.
S. Mich.—Wright Cat.

SORGHUM

- Indian-Grass. 1559. *nutans*, Gray.
Wood Grass. Dry banks and sandy fields. Variable.

C. & S.
Common.

EQUISETACEÆ.

(*Horsetail Family.*)

EQUISETUM

- Great Horse-
tail. 1560. *Telmateia*, Ehrh.

Shore of the upper Great Lakes.—Gray's Manual.

- Common
Horsetail. 1561. *arvense*, L. (***)
Damp, sandy grounds.

Th.
Common.

- Meadow
Horsetail. 1562. *pratense*, Ehrh.

Macomb Co.; Flint; to Pine Lake, Emmet Co.—Winch. Cat.

L. P.
Rare.

- Wood Horse-
tail. 1563. *sylvaticum*, L.

Ann Arbor, rare.—Allmend. Cat.; Clinton Co. (!); Montcalm Co. (!); Flint; and northward where it is common.

Th.

1564. *palustre*, L.

U. P.

- Swamp
Horsetail. 1565. *limosum*, L.

In shallow water.

C. & S.
Common.

- Scouring
Rush. 1566. *hyemale*, L. (***)
Wet banks.

Th.
Common.

1567. *variegatum*, Schleicher.

Th.

S. E.—Winch. Cat.; Hubbardston (!); Muir (!); Macomb Co.; Flint; sand dunes at the head of Little Traverse Bay (!); Drummond's L., etc.

Infr.

1568. *scirpoides*, Michx.

Th.

Macomb Co.; Flint; Hubbardston (!); Petoskey (!); to L. Superior.—Whitney Cat.

FILICES.

(*Ferns.*)

POLYPODIUM

- Common
Polypody. 1569. *vulgare*, L. (***)

Th.

Dry banks and rocks. Grand Ledge—Prof. W. J. Beal; Hubbardston (!), etc. Rarely seen in L. P., but very common in U. P.

ADIANTUM

- American Maiden-hair. 1570. *pedatum*, L. Th.
Rich, moist woods. One of our most beautiful ferns. Common.

PTERIS

- Bracken or Eagle-Fern. 1571. *aquilina*, L. (***) Th.
Thickets. Common.

PELLÆA

- Slender Cliff-Brake. 1572. *gracilis*, Hook.
Louse Is.—Winch. Cat.
- Clayton's Cliff-Brake. 1573. *atropurpurea*, Link.
Shaded limestone rocks. N. E.—Winch Cat.; Put-in-Bay (!)

CRYPTOGRAMME

- American Rock-Brake. 1574. *acrostichoides*, R. Br. U. P.
Isle Royale.—Gray's Manual.

WOODWARDIA

- Virginia Chain-Fern. 1575. *Virginica*, Smith. Th.
Marshes. Marquette Co.—Burt MS. Cat.; Westville, Montcalm Co. (!); Macomb Co.; Flint; Lansing & So. Haven—Bailey; Hubbardston (!); Ann Arbor—Allmend. Cat.
- Netted Chain-Fern. 1576. *angustifolia*, Smith.
The only known locality of this fern in Michigan is at South Haven, where it was detected in 1880 by L. H. Bailey, Jr.

ASPLENIUM

- Maiden-hair Spleenwort. 1577. *Trichomanes*, L. N.
N. E.—Winch. Cat.
- Ebony Spleenwort. 1578. *ebeneum*, Ait.
Allegan (!)—Miss Josie A. Williams.
- Wall-Rue. 1579. *Ruta-muraria*, L.
N. E.—Winch. Cat.
- Narrow-leaved Spleenwort. 1580. *angustifolium*, Michx. C. & S.
Rich woods. S. W.—Wright Cat.; Ann Arbor, rare—Allmendinger Cat.; Flint; S. Haven and Lansing—Bailey; Ionia Co. (!). Infrequent.
- Silvery Spleenwort. 1581. *thelypteroides*, Michx. (***) C. & S.
Rich woods.
- Lady-Fern. 1582. *Filix-fœmina*, Bernh. (***) Th.
Moist woods. Exceedingly variable. Common.
- Lady-Fern. 1583. *Filix-fœmina*, Bernh., var. *exile*, Eaton.
Hubbardston (!).

CAMPTOSORUS

- Walking-Leaf. 1584. *rhizophyllus*, Link. (?)
Occurs in N. Ohio, and may be looked for S.

PHEGopteris

- Common Beech-Fern. 1585. *polypodioides*, Fée. U. P.
Isle Royale—Dr. A. B. Lyons.
- Hexagon Beech-Fern. 1586. *hexagonoptera*, Fée. C. & S.
Beech woods. Flint; Hubbardston (!); Ann Arbor—Allmendinger Cat. Rare.
- Oak-Fern. 1587. *Dryopteris*, Fée. Th.
Open woods. Frequent n. of lat. 43°, especially under pines.

ASPIDIUM

- Marsh Shield-Fern. 1588. *Thelypteris*, Swartz. Th.
Swamps. Frequent.
- New York Shield-Fern. 1589. *Noveboracense*, Swartz. C. & S.
Swamps. Ann Arbor—Allmendinger Cat.; Macomb Co.; Lansing—Bailey; Hubbardston (!).
- Fragrant Wood-Fern. 1590. *fragrans*, Swartz. U. P.
Crevices of shaded cliffs. Isle Royale, and Keweenaw Peninsula.—Dr. Lyons.
- Spinulose or Common Wood-Fern. 1591. *spinulosum*, Swartz, var. *vulgare*, Eaton. Th.
Shady woods. Flint; Hubbardston (!); L. Superior—D. C. Eaton, Ferns of N. A.
- Spinulose or Common Wood-Fern. 1592. *spinulosum*, Swartz, var. *intermedium*, Eaton. Th.
Woods. Common.
- Spinulose or Common Wood-Fern. 1593. *spinulosum*, Swartz, var. *dilatatum*, Eaton. Th.
Woods. Ann Arbor—Allmendinger Cat.; Macomb Co.; Flint; Hubbardston (!); Petoskey (!); and northward.
- Boott's Wood-Fern. 1594. *Boottii*, Tuckerman.
Alder thickets. Hubbardston (!); Ann Arbor—Winch. Cat.
- Crested Wood-Fern. 1595. *cristatum*, Swartz. Th.
Swamps. Frequent.
1596. *cristatum*, Swartz, var. *Clintonianum*, Eaton.
Ann Arbor.—Allmendinger Cat; Hubbardston (!).
- Goldie's Wood-Fern. 1597. *Goldianum*, Hook. C. & S.
Moist woods. Lansing.—Bailey; Flint; Hubbardston (!). Rare.
- Male-Fern. 1598. *Filix-mas*, Swartz. (*) U. P.
Rocky woods. Keweenaw Peninsula, Lake Superior.—Gray.
- Evergreen Wood-Fern. 1599. *marginale*, Swartz. (***) Th.
Hillsides in rich woods. S. Haven—Bailey; Flint; Hubbardston (!); and northward. Frequent.
- Christmas-Fern. 1600. *acrostichoides*, Swartz. Th.
Shady hillsides. Fronds evergreen, used for decoration. Common.
- Holly-Fern. 1601. *Lonchitis*, Swartz. U. P.
Woods. Southern shore of L. Superior.—Prof. Whitney.
- Prickly Shield-Fern. 1602. *aculeatum*, Swartz., var. *Braunii*, Koch. U. P.
Ontonagon Peninsula.—Eaton's Ferns of N. A.

CYSTOPTERIS

- Bulblet Cystopteris. 1603. *bulbifera*, Bernh. Th.
Moist shaded hillsides. Locally frequent.
- Brittle-Fern. 1604. *fragilis*, Bernh. Th.
Woods and river banks. Ann Arbor—Allmendinger Cat.; Lansing—Bailey; Flint; Hubbardston (!) northward to L. Superior—Whitney.
- Mountain Cystopteris. 1605. *montana*, Bernh.
North shore of Lake Superior, J. Macoun, 1869,—Eaton's Ferns of N. A.; and probably in our district.

ONOCLEA

- Ostrich-Fern. 1606. *struthiopteris*, Hoff. Th.
Alluvial soil. Worthy of cultivation; one of our finest ferns. Infrequent.
- Sensitive Fern. 1607. *sensibilis*, L. Th.
Wet places. Abundant.

WOODSIA

- Obtuse-leaved Woodsia. 1608. *obtus*, Torr. U. P.
Rocky places. Not rare.

- Rusty Woodsia. 1609. *Ilvensis*, R. Br. N. & U. P.
N. E.—Winch. Cat.; L. Superior—Whitney Cat.
- Smooth Woodsia. 1610. *glabella*, R. Br. ?
North Shore of Lake Superior—J. Macoun.
- Northern Woodsia. 1611. *hyperborea*, R. Br. ?
North shore of Lake Superior—J. Macoun. The last two species may be looked for in our district.
- Oregon Woodsia. 1612. *Oregana*, D. C. Eaton. U. P.
Crevice of rocks south shore of Lake Superior—Gray's Manual.

DICKSONIA

- Hairy Dicksonia. 1613. *piloscula*, Willd. N.
Petoskey, Emmet Co.,—Winch. Cat.

OSMUNDA

- Royal-Fern. 1614. *regalis*, L. (***) Th.
Swamps. Common.
- Clayton's Flowering-Fern. 1615. *Claytoniana*, L. Th.
Moist grounds. Common.
- Cinnamon-Fern. 1616. *cinnamomea*, L. Common.
Swamps.

BOTRYCHIUM

- Moonwort, 1617. *Lunaria*, Swartz. U. P.
"Lake Superior (Lesquereux), and sparingly northward."—Eaton in Gray's Manual.
- Hitchcock's Moonwort. 1618. *simplex*, Hitchcock. U. P.
Hillsides. Westward to Lake Superior.—D. C. Eaton, Ferns of N. Am.
- Lanceolate Grape-Fern. 1619. *lanceolatum*, Angström. U. P.
Damp mossy places. Lake Superior—H. Gillman.
- Matricary Grape-Fern. 1620. *matricariæfolium*, Al. Braun. U. P.
Dark wet woods. Lake Superior.—D. C. Eaton.
- Virginia Grape-Fern. 1621. *Virginicum*, Swartz. Th.
Rich woods. Common.
1622. *ternatum*, Swartz, var. *lunaroides*, Eaton.
J. Macoun.
- Ternate Grape-Fern. 1623. *ternatum*, Swartz, var. *obliquum*, Eaton.
Pastures and meadows. Fort Gratiot and S. Mich.—Winch. Cat.; Flint; S. Haven,—Bailey; Lansing (!); Ann Arbor,—Allmendinger Cat.; Gratiot Infrequent.
- Dissected G.-F. 1624. *ternatum*, Swartz, var. *dissectum*, Eaton.
South Haven (!)—Bailey.

LYCOPODIACEÆ.

(Club-moss Family.)

LYCOPODIUM

- Club-moss. 1625. *lucidulum*, Mx. Th.
Moist woods. Frequent.
- Club-moss. 1626. *Selago*, L.
Lake Superior—Gray's Manual.
- Club-moss. 1627. *inundatum*, L. Th.
Drummond's I., Willow River, Huron Co., Sugar Is.—Winch Cat.

| | | |
|------------------------------|--|------------|
| Club-moss. | 1628. <i>annotinum</i> , L. | N. & U. P. |
| | Woods. Petoskey (!) to L. Superior. | Common. |
| Tree-like C. Ground-Pine. | 1629. <i>dendroideum</i> , Michx. | Th. |
| | Moist woods. | Common. |
| Common Club-moss. | 1630. <i>clavatum</i> , L. (***) | Th. |
| | Dry woods. | Common. |
| | 1631. <i>complanatum</i> , L. | Th. |
| | Bangor, Van Buren Co.—Bailey; Woodard Lake, Ionia Co.(!); Flint; Macomb Co.; Stanton(!); and northward. | |

SELAGINELLA

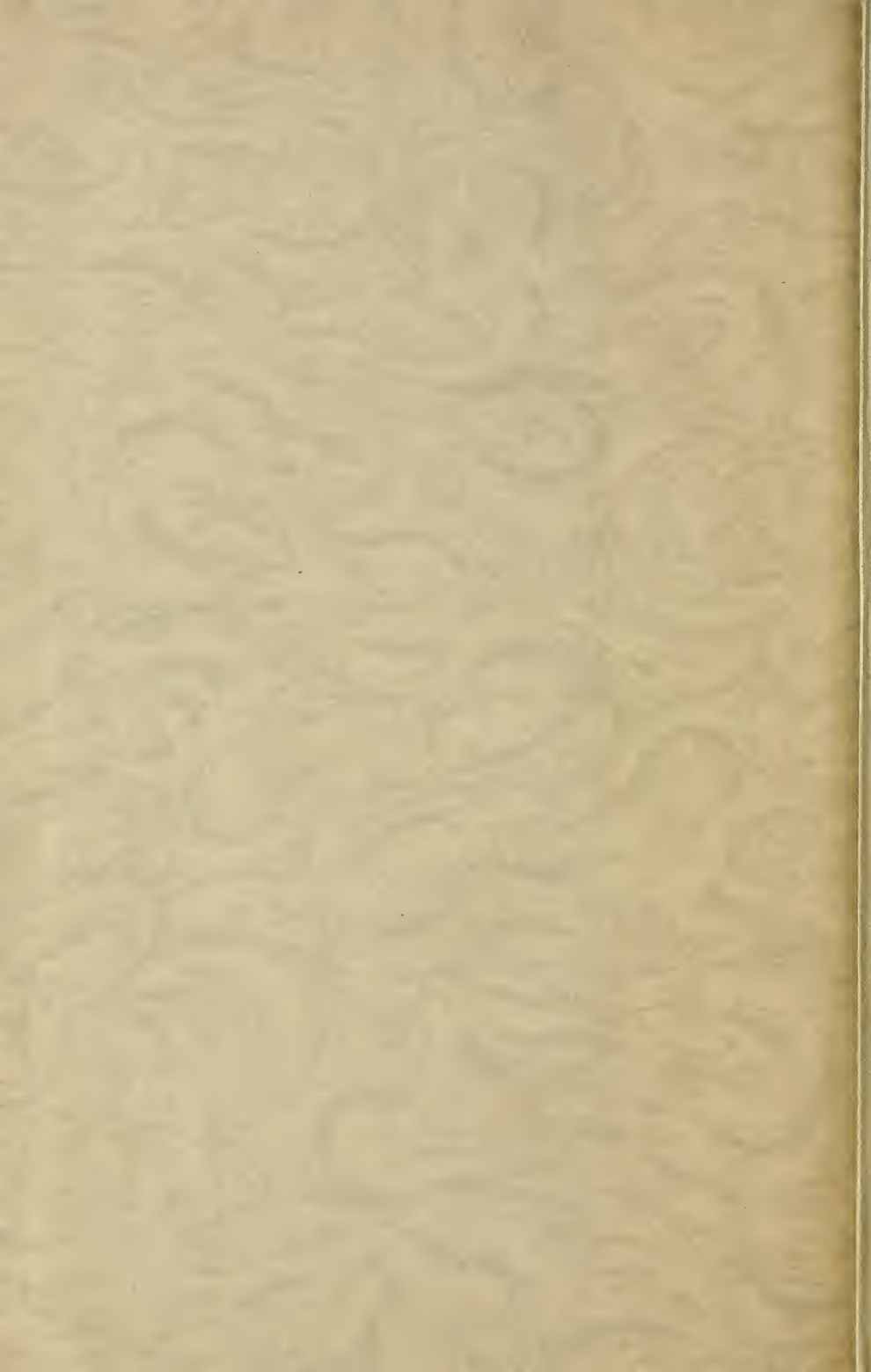
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| Selaginella. | 1632. <i>selaginoides</i> , Link. | U. P. |
| | Isle Royale—Dr. A. B. Lyons. | |
| Selaginella. | 1633. <i>rupestris</i> , Spring. | Th. |
| | Flint; Woodard Lake(!); rare in L. P., but common in U. P. | |
| Selaginella. | 1634. <i>apus</i> , Spring. | |
| | Ann Arbor—Allmendinger Cat.; Hubbardston(!) | Infrequent. |

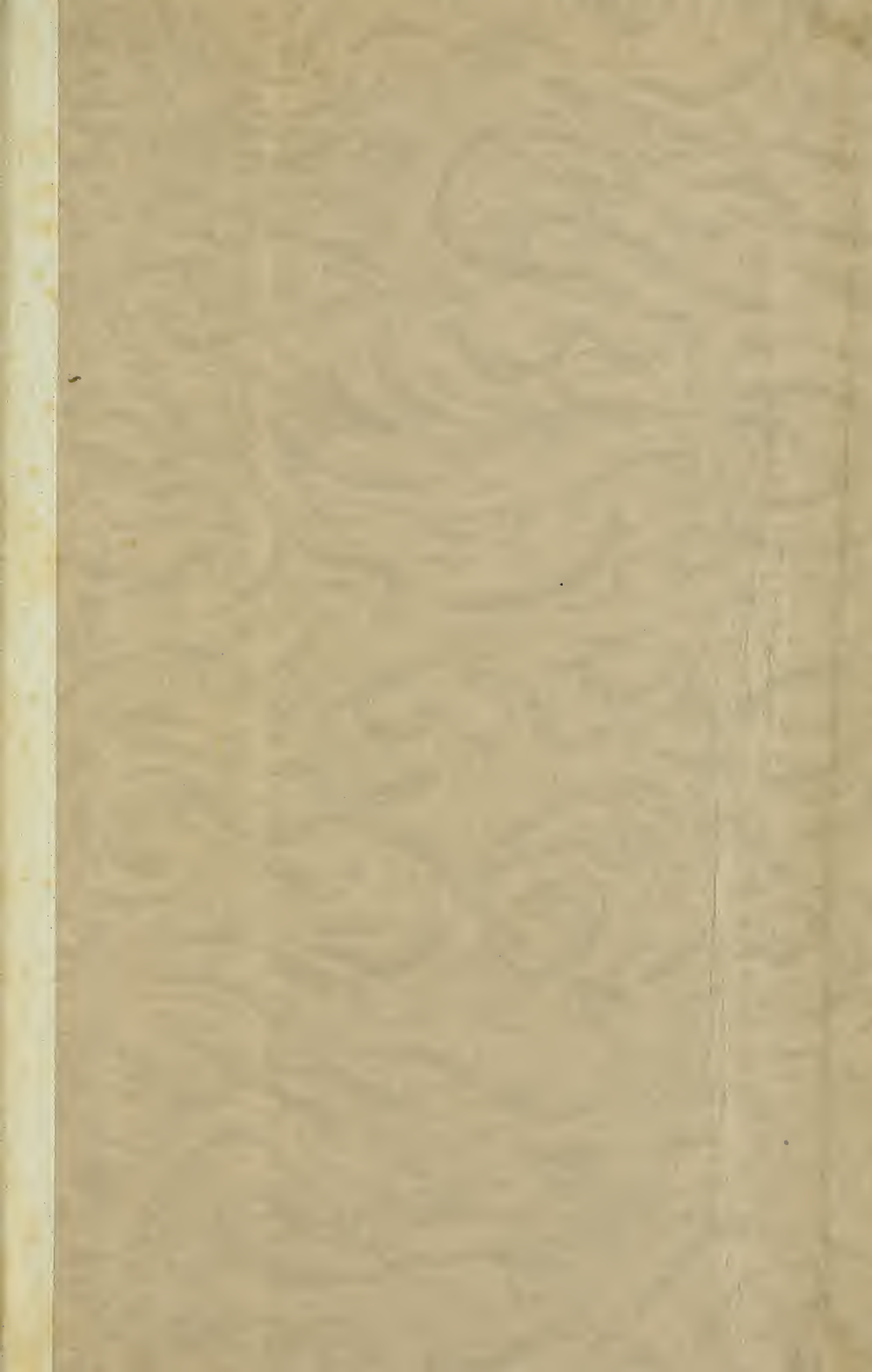
ERRATA.

- Page 5, line 22. For "three-fourths" read *two-thirds*.
 Page 6, line 22. For "eltaum" read *elatum*.
 Page 6, line 24. For "Sheperdia" read *Shepherdia*.
 Page 7, line 13 from the bottom. For "Potamageton" read *Potamogeton*.
 Page 10, note under No. 16. For "full—double" read *full-double*.
 Page 12, under No. 43, after "Flint, etc.," read *Commonly cultivated for hedges, and rarely adventive*.
 Page 12, note under No. 44. For "Common" read *Common*.
 Page 14. No. 78 is an introduced plant.
 Page 18, No. 150, com. name. For "Long-eared" read *Long-leaved*.
 Page 18, No. 160. Read "Adv. and rare," after "Dr. Wright, Dr. Clark."
 Page 19, No. 171, com. name. Insert a period after "Indian Mallow."
 Page 19. No. 172 is indigenous.
 Page 19, No. 174, com. name. Insert a period after "Basswood."
 Page 20. No. 182 is adventive from Europe.
 Page 21, note under No. 195. For "inoculous" read *innocuous*.
 Page 21, No. 196. For "radican" read *radicans*.
 Page 26, No. 273. For "Leucantha" read *leucantha*.
 Page 29, note under No. 318. For "Kittatiny" read *Kittatinny*.
 Page 29, note under No. 330. For "Crategus" read *Cratægus*.
 Page 36, note under No. 431. For "flower" read *fruit*.
 Page 40. Read "BARRENS" as part of note under No. 502—*Bowens*. S. Mich., etc.
 Page 42, No. 541. For "var. L.," read *L., var.*
 Page 56, No. 792, com. name. For "Frog-Fruit" read *Fog-fruit*.
 Page 64, No. 911. For "S." read *C. & S.*
 Page 65, No. 929. For "lapithifolium" read *lapathifolium*.
 Page 70, No. 1010. For "vulgoris," read *vulgaris* *Lam.*
 Page 74, note under No. 1057. For "cental" read *central*.
 Page 79, note under No. 1130. Substitute a period for the comma after "pine region."
 Page 87, No. 1261. For "Shultes," read *Schultes*.
 Page 88, note under No. 1284. For "Baily" read *Bailey*.
 Page 89, No. 1309. For "teretinscula," read *teretiuscula*, *Good*.
 Page 92, No. 1389. For "Scabrata," read *scabrata*.
 Page 94, No. 1440. For "Low Grounds," read *Low ground*.
 Page 96, note under No. 1466. Substitute a period for the comma after "River banks."



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